MOCK TRIAL

NATIONAL HIGH SCHOOL MOCK TRIAL CHAMPIONSHIP

KALAMAZOO, MI

MAY 4-7, 2022

Michigan Center for Civic Education

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Championing education for active and informed engagement in the practice of democracy.

ACKNOWLEDGEMENTS

Michigan's participation in high school mock trial spans decades. Our great community convenes to guide and support students through the exploration, understanding, comprehension, frustration, tears, eureka moments, thrills, heartache, and jubilation that is mock trial all for personal growth. For what is the purpose of civic educational programs if not to uplift and empower the next generation of critical thinkers? Our students proceed confidently through life, not immune to mistakes and errors along the way, rather equipped to meet challenges head-on, to analyze all perspectives, to ask probing questions, and to adapt to the inevitable and unexpected changes in life. This state's commitment to helping students in that journey is absolute.

That's why in 2017, the Michigan Center for Civic Education committed to our own journey of growth and development to bring the National High School Mock Trial Tournament to our great state. Despite this history in mock trial, Michigan had never hosted the National Championship. We believed then and continue to believe now that taking on this endeavor would grow and enhance our efforts to provide civic education opportunities to all students, teachers and their communities. No one could have guessed the twists, turns, and roadblocks we would encounter along the way. Persevering through those challenges has allowed us to create and develop new pathways for growth. For that, we are thankful, and we are also grateful for the members of our community who have come together with us on this journey.

MCCE would like to extend our deep appreciation to the State Bar of Michigan, including the Litigation and Young Lawyers sections, among others; to the National High School Mock Trial Championship Board of Directors for their enduring support; and to Discover Kalamazoo for working side-by-side with us to ensure a successful event. Thank you to the dedicated Kalamazoo Steering Committee and the Michigan Center for Civic Education Board of Directors. Thank you to the legal community, including our judiciary, attorneys, paralegals, legal assistants, law firms and local bar associations, and our educational and business communities for your support and encouragement.

Most of all, congratulations to all State Champions on qualifying for Nationals! To each and every student, teacher, coach, and community member, please know an amazing group of dedicated individuals has worked diligently to bring you a case and experience to challenge and honor you. Please enjoy the journey and the process! As you take time to analyze each witness, explore the fact problem, scrutinize the exhibits, and more, please take the time to make sure you appreciate your community - your teammates, the artists, the journalists, teachers, coaches, and supporters who aid and assist your journey to delve deep into the joys of mock trial.

We truly hope you will have a wonderful, edifying experience at this 2022 National High School Championship.

Sincerely,

Christine Hekman James Liggins, Jr. Ellen Zwarensteyn

Acknowledgements

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Note to Teams: Pursuant to Michigan Court Rule 2.110(B), a defendant is required to file and serve a separate responsive pleading (i.e., Answer) to a Complaint. However, in an effort to reduce the footprint of printing this case, the Complaint and Answer have been consolidated in the same document here.

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF KALAMAZOO

Jay Johnson as Personal Representative
of the Estate of Andromeda Johnson,

Plaintiff

Case No.: 2022-0057-NI
Honorable Phillip Shaeffer

v.

Cheddar Autonomous Vehicles, Inc.

Defendant.

PLAINTIFF'S COMPLAINT FOR NEGLIGENCE AND DEMAND FOR TRIAL BY JURY AND DEFENDANT'S ANSWER

NOW COMES Plaintiff Jay Johnson as Personal Representative for the Estate of Andromeda Johnson, through their undersigned counsel and for their Complaint against Defendant Cheddar Autonomous Vehicles, Inc. ("Cheddar"), states as follows:

PARTIES

1. At all times relevant hereto, Plaintiff Jay Johnson is and was a resident of Kalamazoo County, Michigan, and is and was the parent of the deceased Andromeda Johnson, hereinafter "Andromeda" or "Decedent." Plaintiff is the duly appointed personal representative of the intestate decedent and brings this action on behalf of the estate pursuant to MCL 600.2922(2).

ANSWER: Admitted upon information and belief.

2. At all times relevant hereto, Andromeda was a resident of Kalamazoo County, Michigan and a student at Superior State University located in Kalamazoo.

ANSWER: Admitted upon information and belief.

3. At all times relevant hereto, Defendant Cheddar is and was a Michigan corporation with its principal place of business located in Kalamazoo County, Michigan.

ANSWER: Admitted upon information and belief.

4. Cheddar is engaged in the business of and derives substantial profit from researching, designing, engineering, manufacturing, producing, servicing, marketing, and selling autonomous motor vehicles.

ANSWER: Admitted upon information and belief.

JURISDICTION AND VENUE

5. Jurisdiction and venue are proper as the events giving rise to Plaintiff's Complaint occurred in Kalamazoo County, Michigan and the amount in controversy exceeds the minimal jurisdictional requirements of this Court.

ANSWER: Admitted upon information and belief.

GENERAL ALLEGATIONS

6. On or about April 17, 2021, at approximately 12:03 pm, Cheddar was operating an autonomous motor vehicle (the "AV") on the campus of Superior State University in accordance with Michigan Vehicle Code Act 300 of 1949, specifically, MCL 257.665 et seq. (the "Act")

ANSWER: Admitted upon information and belief.

7. In accordance with the Act, Cheddar participated in the Safe Autonomous Vehicles (SAVE) project wherein it was able to operate its automated motor vehicle on the Superior

State University Campus for the research and or testing of automated motor vehicles with or without a human operator.

ANSWER: Admitted upon information and belief.

8. The AV was a Cheddar taxi traveling south on Gilbert Avenue at the cross section of Riverview Drive very near the Alma Powell Library and General Administration Building located on campus.

ANSWER: Admitted upon information and belief.

9. The AV was being operated by Cheddar with a safety driver in the vehicle, Rae Tucker.

ANSWER: Admitted upon information and belief.

10. At the same time, Decedent was standing at the intersection of Gilbert Avenue and Riverview Drive when she was hit by the AV.

ANSWER: Denied. By way of further response, upon information and belief, Decedent was standing or walking *in* the intersection, against the right of way, when she was struck.

11. Cheddar negligently designed and/or operated the AV in one or more of the following ways:

a. Cheddar failed to install a LiDAR system.

ANSWER: Denied as stated. Cheddar reasonably chose not to install a LiDAR system after a careful consideration of the costs and benefits of doing so.

b. Cheddar failed to engineer the AV to stop immediately upon object detection;

ANSWER: Denied.

c. Cheddar failed to anticipate the loss of fidelity from the AV's camera systems;

ANSWER: Denied.

d. Cheddar did not reasonably design, maintain, or operate the processing system of the AV;

ANSWER: Denied.

e. Cheddar did not maintain the AV;

ANSWER: Denied.

f. Cheddar allowed the safety driver, Rae Tucker, to continue working in this safety critical position despite Tucker's employment history of operating AVs while distracted;

ANSWER: Denied.

g. Such other negligence as may be ascertained through discovery.

ANSWER: Denied.

12. Because of Defendant's afore-mentioned failures, the Decedent was severely injured and ultimately died of her injuries.

ANSWER: Denied. Cheddar admits only that Decedent was struck and that she later died.

13. Defendant's negligence caused harm, losses and damages to the Plaintiff and/or each interested party Plaintiff represents.

ANSWER: Denied.

COUNT ONE – NEGLIGENCE

14. Defendant Cheddar breached its duty of care by designing, maintaining, or operating its AV in a negligent manner, causing the Decedent's death. Said collision, injuries, and resultant death were caused solely by the negligence, tortious conduct and wrongdoing of Defendant Cheddar.

ANSWER: Denied.

15. As a direct and proximate result of Defendant's negligence, tortious conduct and wrongdoing that resulted in Decedent's death, Plaintiff has incurred funeral expenses, medical and other healthcare-related expenses, and the Plaintiff estate lost income, lost profits, and/or lost earning capacity.

ANSWER: Denied.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff requests that the Court enter judgment against Defendant as follows:

a. For Plaintiff's general and punitive damages;

b. For Plaintiff's costs incurred in pursuing these claims including reasonable attorney fees;

c. For pre- and post-judgment interest to the extent provided by law;

d. For such further relief as the Court deems just and fair.

DEMAND FOR JURY TRIAL

Plaintiff demands a trial by jury on all issues so triable.

SPECIAL DEFENSE – COMPARATIVE NEGLIGENCE

Defendant avers that Plaintiff acted unreasonably, that Plaintiff's unreasonable actions caused her own death in whole or in part, and that any recovery against it should be reduced by the percentage of Plaintiff's negligence. Defendant avers that Plaintiff was negligent in one or more of the following ways:

a. Entering against the traffic signal a roadway on which vehicles were traveling with the right of way;
b. Moving erratically and/or at an unreasonable rate of speed; and/or
c. Failing to pay proper attention to her surroundings;

Ealy & Ealy

By: */s/* _____
Virginia Ealy, Esquire
Clifton Ealy, Esquire

Attorneys for Plaintiff Jay Johnson as Personal Representative of the Estate of Andromeda Johnson

Culpepper, Rayman & Enslen

By: */s/* _____
Richard Enslen, Esquire

Attorney for Cheddar Autonomous Vehicles

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF KALAMAZOO

Jay Johnson as Personal Representative
of the Estate of Andromeda Johnson,

Plaintiff

Case No.: 2022-0057-NI
Honorable Phillip Shaeffer

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Defendant.

STIPULATIONS

1. All exhibits included in the problem are authentic in all respects, and no objections to the authenticity of the exhibits shall be entertained.

2. Stipulations cannot be contradicted or challenged.

3. Jurisdiction and venue are proper and may not be challenged.

4. Chain of custody for evidence is not in dispute.

5. The Defendant Cheddar Autonomous Vehicles, Inc. and its executives voluntarily waived any Fifth Amendment rights that could have governed their testimony and will testify at trial. No Fifth Amendment privileges will be entertained, and no Fifth Amendment colloquy need be conducted.

6. The introduction provided is for background information only and of no legal consequence in terms of the trial and is not admissible for impeachment purposes or for any other purpose.

7. The signatures and signature representations (items marked with /s/) are authentic. All statements were signed under penalty of perjury, even if they do not have an /s/.

8. All witnesses had the opportunity to review their statements 30 minutes before trial and had nothing of significance to add.

9. Any occurrences of a gender-specific pronoun used in reference to a character who may be called as a witness is unintentional. Assume the pronoun is gender neutral.

10. By agreement of the parties, the trial has been bifurcated. The first trial will be on liability only, and a later trial will address damages, if necessary.

11. Decedent Andromeda Johnson was female and self-selected pronouns of she/her/hers prior to her passing.

12. Decedent Andromeda Johnson's death was caused by a collision with a Cheddar Autonomous Vehicles "Colt" vehicle, license plate UM1998, on April 17, 2021 at approximately 12:03 p.m. at or near the intersection of Gilbert Avenue and Riverview Drive on the campus of Superior State University, Kalamazoo, Michigan.

13. Rae Tucker was acting within the scope of employment when in the "Colt" vehicle on April 17, 2021.

14. Decedent Andromeda Johnson had no pre-existing medical conditions that contributed to her death and was, prior to the collision, expected to live to a normal life expectancy.

15. Andromeda Johnson died intestate. Jay Johnson was appointed as the personal representative of Andromeda Johnson's estate by the Kalamazoo County Probate Court on July 19, 2021. The (limited) tangible property and funds in the estate have been distributed to the estate's sole beneficiary, Jay Johnson, and the estate's sole remaining asset is the instant action.

16. The "Colt" vehicle that struck Andromeda Johnson on April 17, 2021 was an "automated motor vehicle" within the meaning of Michigan Code 257.2b(2) and 257.665 and met all conditions for the operation of an automated motor vehicle established by the State of Michigan.

17. Both sides have provided timely pre-trial notice regarding testimony as to character evidence.

18. Conspiracy to Riot is a violation of Michigan Compiled Laws § 752.541. Pursuant to § 752.544, the crime is a felony punishable by not more than 10 years imprisonment.

19. Computer hacking is a violation of 18 U.S.C. § 1030. It is a felony punishable by not more than 10 years imprisonment.

20. This action was filed on August 6, 2021, and discovery commenced on November 8, 2021. The plaintiff in this action served a subpoena on Verizon Wireless, the service provider for the cell phone owned by Rae Tucker, on December 6, 2021. Verizon responded on January 4, 2022 that it maintains records of phone activity for three months and thus all records pertaining to April 17, 2021 had been routinely deleted on approximately July 2021.

21. In Michigan, law enforcement officers who observe an automotive collision or its aftermath are required by police regulations to complete a report detailing their observations. Exhibit 1 is a diagram of the scene of the collision drawn from the report of Patrol Officer Matthew Lager, which report is Exhibit 5. Exhibit 1 accurately depicts the scene following the collision, when all vehicles and bodies had come to rest.

22. Exhibit 2 is a portion of promotional materials distributed by Cheddar Autonomous Vehicles to potential customers. Exhibit 2 does not depict a Cheddar Colt vehicle but instead shows possible configurations of an Autonomous Vehicle.

23. Exhibit 3 is an excerpt from a pamphlet titled "Autonomous Vehicles and How They Work: A Guide for the Curious" licensed by Cheddar Autonomous Vehicles from its author, the Society of Automotive Engineers (now SAE International), and utilized in materials distributed by Cheddar Autonomous Vehicles to potential customers and regulators.

24. The handwriting on the comment on Exhibit 11 beginning "Micki…" is M.C. Kamman's. The handwriting on the responsive comment is Mikel Thurston-Griffith's.

25. Exhibits 4a-4d, 6, 7, and 8 were produced in response to plaintiff's document requests from the computer servers of Cheddar Autonomous Vehicles.

26. Identical copies of Exhibit 5 were obtained by the parties from the City of Kalamazoo Office of Public Safety and the Superior State University Police Department.

27. Officer Lager is a member of the Army Reserves and was activated for duty on March 1, 2022. Due to his deployment, he is unavailable to testify. Both parties agree to waive objections under Rule 804(a). Objections may be heard pursuant to 804(b) or other rules, as appropriate.

28. Exhibits 9 and 10 were produced by their authors, respectively, in expert discovery.

29. Exhibit 11 was produced in response to plaintiff's document requests from the hardcopy files of Mikel Thurston-Griffith at Cheddar Autonomous Vehicles.

30. Exhibit 12 was produced by Jay Johnson in response to defendant's document requests.

31. As Lead Designer, Max C. Kamman is familiar with and can testify with knowledge about Cheddar Autonomous Vehicle documents produced through discovery.

Ealy & Ealy	Culpepper, Rayman & Enslen
By: */s/*	By: */s/*
Clifton Ealy, Esquire	Richard Enslen, Esquire

JURY INSTRUCTIONS

Role of the Jury

Now that you have been sworn, I have the following preliminary instructions for your guidance as jurors in this case.

You will hear the evidence, decide what the facts are, and then apply those facts to the law that I will give to you.

You and only you will be the judges of the facts. You will have to decide what happened. My role is to be the judge of the law. I make whatever legal decisions have to be made during the course of the trial, and I will explain to you the legal principles that must guide you in your decisions. You must follow that law whether you agree with it or not.

Moreover, although the lawyers may have called your attention to certain facts or factual conclusions that they thought were important, what the lawyers said is not evidence and is not binding on you. It is your own recollection and interpretation of the evidence that controls your decision in this case.

Neither sympathy nor prejudice should influence your verdict. You are to apply the law as stated in these instructions to the facts as you find them, and in this way decide the case.

Evidence

The evidence from which you are to find the facts consists of the following:

1. The testimony of the witnesses;
2. Documents received as exhibits;
3. Any facts that are stipulated--that is, formally agreed to by the parties; and
4. [Any facts that are judicially noticed--that is, facts I say you must accept as true even without other evidence.]

The following things are not evidence:

1. Statements, arguments, and questions of the lawyers for the parties in this case;
2. Objections by lawyers;
3. Any testimony I tell you to disregard; and
4. Anything you may see or hear about this case outside the courtroom.

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

There are rules that control what can be received into evidence. When a lawyer asks a question or offers an exhibit into evidence, and a lawyer on the other side thinks that it is not permitted by the rules of evidence, that lawyer may object. This simply means that the lawyer is requesting

that I make a decision on a particular rule of evidence. You should not be influenced by the fact that an objection is made. Objections to questions are not evidence. Lawyers have an obligation to their clients to make objections when they believe that evidence being offered is improper. You should not be influenced by the objection or by the court's ruling on it. If the objection is sustained, ignore the question. If it is overruled, treat the answer like any other.

Also, certain testimony or other evidence may be ordered struck from the record and you will be instructed to disregard this evidence. Do not consider any testimony or other evidence that gets struck or excluded. Do not speculate about what a witness might have said or what an exhibit might have shown.

Direct and Circumstantial Evidence

Evidence may either be direct evidence or circumstantial evidence. Direct evidence is direct proof of a fact, such as testimony by a witness about what that witness personally saw, heard, or did. Circumstantial evidence is proof of one or more facts from which you could find another fact. You should consider both kinds of evidence. The law makes no distinction between the weight to be given to either direct or circumstantial evidence. It is for you to decide how much weight to give. You may decide the case solely based on circumstantial evidence.

Credibility

In deciding what the facts are, you may have to decide what testimony you believe and what testimony you do not believe. You are the sole judges of the credibility of the witnesses. "Credibility" means whether a witness is worthy of belief. You may believe everything a witness says or only part of it or none of it. In deciding what to believe, you may consider a number of factors, including the following:

1. the opportunity and ability of the witness to see or hear or know the things the witness testifies to;
2. the quality of the witness's understanding and memory;
3. the witness's manner while testifying;
4. whether the witness has an interest in the outcome of the case or any motive, bias or prejudice;
5. whether the witness is contradicted by anything the witness said or wrote before trial or by other evidence;
6. how reasonable the witness's testimony is when considered in the light of other evidence that you believe; and
7. any other factors that bear on believability.

In deciding the question of credibility, remember to use your common sense, your good judgment, and your experience. Inconsistencies or discrepancies in a witness' testimony or between the testimonies of different witnesses may or may not cause you to disbelieve a witness' testimony. Two or more persons witnessing an event may simply see or hear it differently. Mistaken recollection, like failure to recall, is a common human experience. In weighing the effect of an inconsistency, you should also consider whether it was about a matter of importance

or an insignificant detail. You should also consider whether the inconsistency was innocent or intentional.

After you make your own judgment about the believability of a witness, you can then attach to that witness' testimony the importance or weight that you think it deserves.

The weight of the evidence to prove a fact does not necessarily depend on the number of witnesses who testified or the quantity of evidence that was presented. What is more important than numbers or quantity is how believable the witnesses were, and how much weight you think their testimony deserves.

Burden of Proof

This is a civil case in which the plaintiff seeks damages.

The plaintiff has the burden of proving:

(a) that the defendant was negligent in one or more of the ways claimed;

(b) that the plaintiff was injured; and

(c) that the negligence of the defendant was a factual and proximate cause of the injuries to the plaintiff.

Your verdict will be for the plaintiff if you decide that all of these have been proved.

Your verdict will be for the defendant if you decide that any one of these has not been proved.

The defendant has the burden of proof on its claim that the plaintiff was negligent in one or more of the ways claimed by the defendant and that such negligence was a proximate cause of the injuries to the plaintiff.

The Plaintiff has the burden of proving its case by what is called the "preponderance of the evidence." That means Plaintiff has to prove to you, in light of all the evidence, that what it claims is more likely so than not so. To say it differently: if you were to put the evidence favorable to Plaintiff and the evidence favorable to Defendant on opposite sides of the scales, the Plaintiff would have to make the scales tip ever so slightly to its side. If the Plaintiff fails to meet this burden, the verdict must be for Defendant. If you find after considering all the evidence that a claim or fact is more likely so than not so, then the claim or fact has been proved by a preponderance of the evidence.

You may have heard of the term "proof beyond a reasonable doubt." That is a stricter standard of proof and it applies only to criminal cases. It does not apply in civil cases such as this, so you should put it out of your mind.

This case is bifurcated, so damages are not at issue. As such, the Plaintiff need not prove the extent of the injuries or damages at this time.

Factual and Proximate Cause

In order for the Plaintiff to recover in this case, the Defendant's conduct must have been a factual and proximate cause in bringing about harm. Conduct is a factual cause of harm when the harm would not have occurred absent the conduct. To be a factual cause, the conduct must have been an actual, real factor in causing the harm, even if the result is unusual or unexpected. A factual cause cannot be an imaginary or fanciful factor having no connection or only an insignificant connection with the harm.

To be a factual cause, the Defendant's conduct need not be the only factual cause. But if there was more than one negligent actor, for Plaintiff to recover from Defendant, the Defendant's negligence must have been the most immediate and direct cause of the plaintiff's injury.

Explanation of Wrongful Death

Jay Johnson brings this case as a representative of the estate of Andromeda Johnson against Cheddar Autonomous Vehicles, which the estate claims negligently killed Andromeda Johnson. Under Michigan law, a personal representative may bring such an action, and the estate is the real party in interest in this lawsuit whose damages you are to determine.

If you decide the Plaintiff is entitled to damages, you shall give such amount as you decide to be fair and just, under all the circumstances, to those persons represented in this case. We will address damages in a separate hearing if you find negligence caused Andromeda Johnson's death, and I will give you further instructions at that time, should you reach that decision.

Negligence

Negligence is the failure to use ordinary care. Ordinary care means the care a reasonably careful person would use. Therefore, by "negligence," I mean the failure to do something that a reasonably careful person would do, or the doing of something that a reasonably careful person would not do, under the circumstances that you find existed in this case.

The law does not say what a reasonably careful person using ordinary care would or would not do under such circumstances. That is for you to decide.

Duty to Use Ordinary Care

It was the duty of the defendant, in connection with this occurrence, to use ordinary care for the safety of Andromeda Johnson and others. The defendant in this case, Cheddar Autonomous Vehicles, designed, manufactured, and maintained the vehicle that all parties agree struck Andromeda Johnson.

The Defendant could breach its duty and act negligently by operating a motor vehicle in a manner other than a reasonable person would when exercising ordinary care. The Defendant could also breach that duty by manufacturing, producing, or maintaining the vehicle in a manner other than a reasonable person would when exercising ordinary care.

Duties of the Driver

Cheddar's vehicle operated autonomously with a back-up safety driver, but it is judged exactly as though it did have a normal, human driver. Cheddar Autonomous Vehicles is responsible for the choices that the vehicle made just as it is for the choices of its human safety drivers in its vehicles. The fact that the State of Michigan has allowed autonomous vehicles to operate on the roads does not make Cheddar any more or less responsible for the actions of the vehicle than it would be if a human alone was driving it. Human drivers and autonomous systems can both make decisions that are not reasonable, and human drivers and autonomous vehicles can both be involved in collisions even though all the decisions they made *were* reasonable. The decisions made by the autonomous vehicle are judged by the same standards as they would be if a human made the same decisions at the same time.

A person operating a motor vehicle on a public roadway is bound to use reasonable care and caution in the management and rate of speed of the motor vehicle, having regard for the traffic and the conditions and circumstances surrounding the immediate use of the roadway. All motorists have a general duty to operate their vehicles in a reasonably prudent manner. A motorist is not required to guard against every conceivable result of their actions, but the motorist is required to exercise reasonable care in order to avoid the foreseeable consequences of their actions.

The motor vehicle operator is required to take notice of the conditions before them. If it is apparent that, because of some particular method of proceeding, the operator is likely to bring about an injury, it is their duty to adopt some safer method if with ordinary care that can be done. The motor vehicle operator is bound to anticipate the possibility of meeting other vehicles or pedestrians at any point in the street, and the driver must keep a proper lookout for them. The operator also must keep the automobile under sufficient control to enable the driver to avoid a collision with any other person or object properly using ordinary care.

It is the duty of a person operating a motor vehicle on a public roadway to drive the automobile at a speed which is reasonable and proper, having regard for the traffic and use of the highway, and to avoid endangering the life or safety of any person on the roadway. A person driving on a roadway has a right to assume that others using the roadway will obey the law. If the deceased unexpectedly ran out from the side of the road such that the defendant had no time or opportunity to avoid the accident or to avoid hitting the deceased, then the defendant would not be liable.

One who is confronted with an emergency is not expected to use and exercise the same degree of care that a person would exercise when having more time to deliberate. However, every driver is bound to use the ordinary care a reasonably careful person would exercise under similar circumstances. If the deceased unexpectedly ran out from the side of the road but did so far enough away from the vehicle that the defendant had opportunity to avoid hitting the deceased, but the defendant hit the deceased due to a failure to exercise reasonable care, the defendant may be liable.

The collision under the circumstances of this case does not create a presumption of negligence on the part of a driver of an automobile. That determination is for you to decide. You are to weigh the

evidence even-handedly and reach your decision.

Duty of Pedestrian

Under present-day traffic conditions, the Plaintiff as a pedestrian has certain well-established duties in order to meet the obligation of looking out for their own safety in crossing the street. Before crossing the street the plaintiff had to first, make proper observation as to approaching traffic; second, form a reasonably accurate judgment as to the distance the traffic was away from them and as to the speed at which it was approaching; third, continue observing the traffic while crossing the street or highway; and, lastly, exercise that degree of care and caution which a reasonably careful person would exercise under similar circumstances.

Duty of Designer, Producer, or Maintainer of a Vehicle

Cheddar had a duty to use reasonable care at the time of design, production, and maintenance of the vehicle, so as to eliminate unreasonable risks of harm or injury that were reasonably foreseeable. Reasonable care means that degree of care that a reasonably prudent designer, manufacturer, or maintenance professional would exercise under the circumstances that existed in this case. It is for you to decide, based on the evidence, what a reasonably prudent designed, manufacturer, or maintenance professional would do or would not do under those circumstances.

A failure to fulfill the duty to use reasonable care is negligence.

However, the Defendant had no duty to eliminate risks of harm that were not reasonably foreseeable, and it had no duty to make its product perfectly safe through unreasonable means. The duty remains to act as a reasonable person would, be that in the design, manufacture, maintenance, or operation of the vehicle.

You may consider the totality of the circumstances when determining if Cheddar was negligent in any way. That means that you can consider all the facts you hear in evidence in making your decision, taking consideration of all of the information instead of focusing on any one factor or aspect of the evidence or conduct at issue in this matter.

Spoliation

The Plaintiff here contends that Cheddar or one of its employees destroyed evidence that could have been relevant to your decision. That claim is disputed; Cheddar contends that the evidence was destroyed in the collision at issue, not afterward. If you find that evidence existed in usable form after the collision but that either Cheddar or one of its employees destroyed that evidence, you may – but are not required to – conclude that Cheddar or its employee did so because it would be harmful to Cheddar in this litigation if that evidence still existed. In other words, you might conclude that Cheddar or its employee destroyed the evidence to keep you from seeing it. If that is your conclusion, you can weigh the destruction of that evidence as evidence that Cheddar is liable, treating it as you would any other fact in the case.

Comparative Negligence--Definition

If your verdict is for the Plaintiff, then you must determine the percentage of fault for each party or nonparty whose negligence was a proximate cause of plaintiff's injuries. In determining the percentage of fault, you should consider the nature of the conduct, and the extent to which each person's conduct caused or contributed to plaintiff's injuries. The total amount of damages that the Plaintiff would otherwise be entitled to recover shall be reduced by the percentage of Plaintiff's negligence that contributed as a proximate cause to her death. This is known as comparative negligence. The Plaintiff is not entitled to damages if she was more than 50 percent at fault for her death.

The Court will furnish a Special Verdict Form to assist you in your duties. Your answers to the questions in the Special Verdict Form will provide the basis on which this case will be resolved.

Form of Verdict

QUESTION NO. 1: Was Cheddar Autonomous Vehicles negligent?

Answer: _____ (yes or no)

If you answered "yes," proceed to Question 2. Otherwise sign at the bottom and return to the courtroom.

QUESTION NO. 2: Was Cheddar Autonomous Vehicles' negligence a proximate cause of the plaintiff's death?

Answer: _____ (yes or no)

If you answered "yes," proceed to Question 3. Otherwise sign at the bottom and return to the courtroom.

QUESTION NO. 3: Was Andromeda Johnson negligent in a way that contributed to her own death?

Answer: _____ (yes or no)

If you answered "yes," proceed to Question 4. Otherwise sign at the bottom and return to the courtroom.

QUESTION NO. 4: If you answered "yes" to Question No. 3, then

Using 100 percent as the total, enter the percentage of negligence attributable to Cheddar Autonomous Vehicles, including in that value the negligence, if any, of the safety driver:

_____ percent

Using 100 percent as the total, enter the percentage of negligence attributable to Andromeda Johnson:

_____ percent

The total of these must equal 100 percent.

_____
Foreperson

RETURN TO THE COURTROOM

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF KALAMAZOO

Jay Johnson as Personal Representative
of the Estate of Andromeda Johnson,

Plaintiff

Case No.: 2022-0057-NI
Honorable Phillip Shaeffer

v.

Cheddar Autonomous Vehicles, Inc.

Defendant.

MEMORANDUM AND ORDER

The instant case presents a novel issue for judicial decision, and perhaps for that reason, the parties have both moved for summary disposition under circumstances that would ordinarily not permit them to do so. The Court is therefore forced to address a relatively simple issue, and it will dispose of these motions summarily.

In short, plaintiff avers that the defendant must be liable, because a vehicle operated autonomously that does not slow enough to prevent a collision is necessarily poorly designed, maintained, or programmed. The defendant argues the opposite, that the eyewitness testimony shows that no vehicle could conceivably have stopped in time when the decedent jumped out into the flow of traffic.

The plaintiff is not entitled to summary disposition. Michigan law has been clear that the fact that an accident occurred does not, by itself, give rise to a presumption of negligence., *See Edgerton v Lynch*, 255 Mich. 456, 460 (1931)., and Michigan Vehicle Code 257.665(5) provides that "when engaged, an automated driving system allowing for operation without a human operator shall be considered the driver or operator of a vehicle for purposes of determining conformance to any applicable traffic or motor vehicle laws and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle." Section 665(5) stands for the proposition that the program driving the car must act as a reasonable driver would—no more, no less.

The jury as trier of fact determines who acted reasonably and who did not. The jury's decision is informed by the law applicable to all motor vehicle collisions. "It is the motorist's duty in the use and operation of the motorist's automobile to exercise ordinary and reasonable care and caution, that is, that degree of care and caution which an ordinarily careful and prudent person would exercise under the same or similar conditions." *Zarzecki v Hatch*, 347 Mich. 138, 141 (1956). A driver is not required to "guard against every conceivable result, to take extravagant precautions, to exercise

undue care" and is "entitled to assume that others using the highway in question would under the circumstances at the time use reasonable care themselves and take proper steps to avoid the risk of injury." *Hale v Cooper*, 271 Mich. 348, 354 (1935). Plaintiff's motion cannot succeed; a jury must decide this question.

Nor is defendant entitled to summary relief. True, a driver is not "bound to anticipate that a [pedestrian] will come loping into [the driver's] lane of traffic when [the driver] is unaware of the [individual]'s presence." *Gamet v Jenks*, 38 Mich. App. 719, 724-725 (1972). And also true, a driver's actual knowledge of the presence of pedestrians in the area will impose a heightened duty of vigilance. *Edgerton v Lynch*, 255 Mich. 456, 460 (1931); *see also Mack v. Decker*, 24 Wis. 2d 219, 128 N.W.2d 455 (1964) (a "motorist must increase vigilance if [the motorist] knows or should know that pedestrians are in, or are likely to come into, [the motorist's] course of travel"). Thus, of course, the defendant may argue that its vehicle acted reasonably and stopping was impossible under the circumstances in which Andromeda Johnson was in the intersection. But the operative word there is "argue;" the plaintiff may equally attempt to demonstrate that the vehicle was behaving unreasonably and/or that decedent's appearance in the intersection allowed adequate opportunity for a reasonable driver to stop. This is a fact question, one not for the Court but for the jury.

This is at heart a simple automotive collision case: if the "driver" acted unreasonably – judged under all of the circumstances – and that unreasonable action caused the collision, that "driver" is liable, be the driver human or a computer. Likewise, if the vehicle was negligently designed, produced, maintained, or operated by its designer, manufacturer, or maintainer, and that negligence caused the collision, the entity responsible to design, produce, maintain, or operate the vehicle is liable. That these are the same entity or its hired agents changes nothing. Matters would be no different were the AI here a living driver employed by Cheddar Autonomous Vehicles.

The time has come to return this case to its proper track. This Court is not a referendum on autonomous vehicles as either saviors or contemnors of the American roads. This Court is not a legislature; it is a place where tort disputes are decided.

Two additional issues require the Court's attention. First, the defendant is correct in one aspect of its motion. The Court finds that there is no evidence of willful or malicious conduct here sufficient to support punitive damages. Cheddar and its executives made deliberate design, maintenance, and other choices that may be unreasonable. But even plaintiff does not seriously contend – after the benefit of discovery – that Cheddar intended to cause death or serious injury or acted so far beyond the pale of engineering as to constitute the kind of reckless misconduct necessary to find malice in the absence of intent. Accordingly, plaintiff's demand for punitive damages is struck.

Second, there is the alleged spoliation of evidence. The plaintiff contends that either Rae Tucker or someone else at Cheddar destroyed Rae Tucker's cellular telephone at some point after the collision in order to remove a critical source of

evidence that would have shown that Tucker was using the phone at the time of the collision. It therefore moves for the Court to instruct the jury that Tucker was on the phone at the time of the collision. Tucker and Cheddar deny this allegation and aver that, instead, the phone was destroyed in the collision itself. The parties have stipulated that by the time the relevant information was sought from Tucker's cell phone provider, it had been routinely deleted, and thus whatever information existed has been lost. This is, ultimately, a fact question: if the cell phone was destroyed in the collision, then there was no spoliation. If Cheddar or Tucker (in Tucker's capacity as a Cheddar employee) destroyed the phone after the collision, then it may have been spoliation. It is a matter for the trier of fact, who will be so instructed.

The clerk shall set this matter for trial by jury at the earliest scheduling convenience.

So Ordered.

BY THE COURT

*Shaeffer, J.*_____
Phillip Shaeffer, J.

WITNESSES

The following witnesses are available to be called by the parties. Plaintiff witnesses may not testify or be called on behalf of the defendant. Defense witnesses may not testify or be called behalf of the plaintiff. Each side must call all three of their witnesses.

FOR PLAINTIFF:

- Jay Johnson as Personal Representative of Estate of Andromeda Johnson (Parent)
- Chidi Ransford (Former employee of Defendant)
- Derry Jeter (Plaintiff Expert Witness)

FOR DEFENDANT

- Mikel “Mickie” Thurston-Griffith (CEO of Cheddar Autonomous Vehicles)
- Rae Tucker (Decedent’s roommate and Defendant employee)
- Max C. Kamman (Defendant Expert Witness)

STATEMENT OF JAY JOHNSON

We're not gonna take it. Oh no, we ain't gonna take it. My daughter's death was not an accident. It was the result of classic capitalism. Nothing more than corporate greed and the pangs of new media trading real education for the ADD of likes, followers, and shares. Andromeda, my flesh and blood, gone way too soon. But she did not die in vain. She did not die without purpose. She died fighting for a cause. My Andromeda – a universe of possibility – a galaxy of inspiration.

I was pumped when Andromeda was accepted to Superior State University (SSU) here in Kalamazoo. SSU is a public research university with a good reputation and a great public interest curriculum. And because she had been in the Kalamazoo Public Schools all her life, she was fully qualified for the Kalamazoo Promise, which paid her full tuition at any school in Michigan. Her grades were exceptional, so she qualified for additional grants and scholarships that enabled her to live on campus as well. Good thing, because I didn't have the money for all that, and I didn't want to feel she had to sell her soul to the Man to cover student loans.

Kalamazoo is the perfect place to raise a daughter. Or it was. When Cheddar Motors tried to get hip by making robot cars in 2016, it all started to unravel. I have no issue with jobs for people; I know this not the Smurf village. But, jobs that kill, jobs that take rather than add to society are immoral.

I remember when I first learned that Cheddar was launching that on-demand self-driving taxi on the SSU campus. The company establishment said it was an exciting program that would be a popular option among students on campus. I just got this shiver.

Like Sean Rowe, you know? When the machine has taken the soul from the Man, it's time to leave something behind.

Soon, I devoted myself to trying to stop them. I led protests, and I pushed the University and City Council to ban those monstrous machines. And of course, I made Andromeda promise me she would never, ever ride in one of those things.

Things came to a head in the fall of 2019, at a Kalamazoo City Commission meeting. I was sure that the Power of the People would prevail. I used my five minutes to explain just how terribly dangerous it all was, and I rallied ten or even twenty other people to join me, but Mikel Thurston-Griffith strode to the podium and made all kinds of promises to the Commission. Thurston-Griffith promised that the cars would have real humans in them for at least two years, and that meant jobs for Kalamazoo, and talked all kinds of techno-nonsense about artificial intelligence. I rose in response, like Patrick Henry, but I was told by the bored security guy that I had used my time. And the Council lapped it up, like the campaign contributions Cheddar's PAC made to them, according to Federal Election Commission reports. The approval carried, 4 votes to 1. The one was my Commissioner, and I think she was just trying not to have to deal with me anymore.

But as I taught my beloved Andromeda, when the Man knocks you down, you figure out another way. As 2020 dawned, we started to see the effects of COVID, and by spring, Bookbug – the independent bookstore where I worked part-time – had to close for a while. With some extra time on my hands, I struck upon a brilliant idea: I would go undercover as a safety driver at Cheddar and reveal who they really were. I got a fake ID from… well, let's just say *someone*. Anyway, it was easy, really; the only requirement was a clean driving record, and my ID was fake, so I'm guessing that they never checked

that against any kind of government database. But I was in—I started in like, June! Like Project Veritas, I would be in the belly of the foul beast, exposing its lies.

It turned out to be a bit of a disappointment. Cheddar's training was what they said it would be. We learned to operate the emergency control systems set into the passenger seat, and the sequence to override the computer and bring the car to a slow stop. We also learned the basic rules of the job: no friends in the vehicle, no chatting with customers, no cell phone use, don't touch the control systems except in emergencies, and don't touch the computers except to query their function or to take control. Within a few days, I was on the road.

The only thing that I thought was odd is that for all the darn technology, the Colt had no monitoring system for the safety driver. I mean none. No camera on you, no smart phone app you had to tap to show you were paying attention, nothing. You could literally take a nap for the entire time and no one would be the wiser. A lot of the other safety drivers would brag about playing *Among We* or some game like that all day, or going on dating apps, or Twitter. I preferred books. Not that I was reading them when I was working; I was way too ethical for that. The worst of them all was Andromeda's roommate, Rae, who was some sort of social media influencer. Rae was so addicted to their phone that I cannot imagine Rae not looking at the thing every few minutes and probably posting videos while on the job.

The only time I had a serious issue was one afternoon in December 2020. The sun was really low in the sky, and it caught off the windows on the Radisson tower. Light flooded the car, the computer system flipped out. It braked for a second, then re-accelerated, and I saw a squirrel sunning itself in the roadway. The vehicle didn't even

try to slow down, so I tripped the emergency override and slammed on the brake. I was too slow, and the poor thing was killed. When I brought it to the company's attention, Max Kamman said that the vehicle would understand that the squirrel posed no risk to passengers. As though killing a living being was nothing! What if that had been a kid?

I got in trouble for grabbing the controls outside an emergency. That was dumb; I was probably the only person actually paying attention while on the job. I had a whole shouting match with Max, and I quit. I knew we would have a COVID vaccine soon, and as a greengrocer I was eligible early. So I kept my hours at the Natural Health Food Center on West Main and went back to Bookbug as soon as it reopened. No smoking gun. I guess I wasn't cut out for being a journalist! It wasn't so much giving up as choosing to return to my familiar paths of protesting.

Still, I could take pride in the fact that my activist spirit was in my daughter. She was always asking for my advice on organizing. You see, I've been arrested many times at sit-ins, chain-ins, and the like. The hardest part was when I was convicted of Conspiracy to Riot when protesting the Travel Ban in 2017. Some other protestors got rough, but I am non-violent, and so I refused to plead guilty. I spent four weeks in jail until I could get bail together, and when the jury ultimately convicted me of the felony, I lost my right to vote. I have smartened-up and kept my nose clean since, only getting a misdemeanor trespass ticket one time at another protest. My civil rights were restored in 2019 and I was able to have the conviction expunged, so I was able to rejoin "civil society." I never wanted Andromeda to experience that trauma, so I counseled her in ways to protest while avoiding arrest. We always want a better life for our children, right?

In 2021, Superior State's graduate students were moving to form a union, but the administration was resisting unionization. Obviously, the Johnsons are pro-union; in fact, I've been a member of several in my lifetime, and it's saved me from being fired unfairly many times. So anyway, the union vote was going to be at the end of the semester in spring 2021, and Andromeda was leading the undergraduates who were supporting the grad students. I was so proud. They planned a massive demonstration in front of the administrative buildings for the afternoon of April 17th. The problem was the administration building had been built in 1970, after the old one had been occupied by students during the Long Hot Summer. So the new building was basically protest-proof. BUT Andromeda figured out a way. The Superior State mascot is the Trojans, like ancient Greeks, right? Well, in her Glassblowing class, Andromeda had learned the legend of Archimedes' lens. It's probably not true, but legend had it that Archimedes, the Greek mathematician, used a mirror to light a ship on fire or something. That's how she got the idea to use *light* as a weapon. All she needed to do was use mirrors or reflectors and direct the light through the administrators' windows. It wouldn't light a fire or whatever, but it would sure get their attention! She even came up with a snappy name: Let Our Light Shine! Like the folk song! It was going to be a silent protest, because the grad students' concerns were silenced, right?

The night before, Andromeda stopped by the house for dinner and to pick up some coffee from the Rose Gold. She had brought her laundry over and also had stopped by to pick-up whatever tin foil and cardboard I had. We sat together with a picture of the administration building and figured out how to organize the protestors to make sure every

office got hit with light, but the President's got flooded. Such a special memory with my Andromeda.

The next morning while at work, I got a panicked text around 10 AM. Apparently, the protest was "blowing up." I immediately panicked, but Andromeda explained that it was a good thing, not an actual bomb. Something about tweets or the flash mafia or something? Anyway, she needed a lot more cardboard and a lot more tin foil. Good thing the Natural Health Food Center had plenty! I took an extra hour of leave (I had already planned to be there in support, of course!), grabbed everything that was not already being composted, and paid a day's salary for our entire stock of fair-trade, ethically-sourced aluminum foil. It was a struggle to fit it all in my backpack so I could get it to her (I always bike to work, rain or shine), but I managed.

The sun was shining and I had a light tailwind, so it was basically perfect weather for my ride. I arrived on campus and locked my bike at the racks across Gilbert Avenue from the library. Then I settled in to soak up the light of Mother Sun while I waited for Andromeda to come out. Just a minute or two later, I saw her at the curb at the cross-section of Riverview Drive and Gilbert Ave. My poor girl was hunched over, trying to carry all those reflector things. The breeze wasn't helping her at all; it was pushing those cardboard reflectors in all directions. But she was soldiering on, trying to get across to where I was waiting with the extra supplies she needed.

I do not recall if the light for Riverview Drive was green, yellow or red; I only had eyes for my baby girl. I'm sure she started crossing on the green, though: my Andromeda always follows rules! She definitely didn't get that from me.

What I saw next will forever be seared into my memory. Every time I relive the accident, my mind always does that weird thing where it feels like everything is going in slow-motion. The skies literally parted for me, clouds opening to bathe my baby girl in light. At the same time, I saw one of those Cheddar Taxis approaching the light at the intersection. There were a few people sitting at the tables of the café that is right next to the road as well, and a bunch of other people were moving on the streets, either going to class or coming from class. And a few even had their own reflectors! I was so excited to see the protest succeeding!

It felt like my heart jumped through my chest when I noticed Andromeda approach the intersection. I know that Rae said that she was running toward the intersection, but Rae is wrong. I was there. Andromeda was not running. In fact, she was walking her normal pace. I believe when she got to the intersection, she must've realized she was in a different place than she expected, or maybe she was trying to hold onto one of the reflectors or something. But she had just started to turn away from me when the Cheddar Taxi hit her. It didn't stop – because it was a crappy machine with a crappy safety driver; in fact, it had Rae! Rae was *always* on that giant phone, and when I saw the Cheddar that day, Rae was looking down, not looking out at where the car was going, as we were trained!

It should not have mattered; there was plenty of time for the Colt to slow down, and there was enough time for Rae to override the system if it didn't. The police car stopped! But that horrible robot-car just ran straight through the intersection and hit my baby girl. She was thrown into the air and fell flat on the concrete. Time froze. My hearing was muddled. All I could think was to get to her. I don't even recall how I got

across the street. But I did. I cradled Andromeda in my arms but someone, maybe the police, pulled me from her and said that it was dangerous for her to be moved. As I pulled away, I saw Rae running toward me, grasping what looked like a phone with some video or something playing on it. Rae just kept saying “I’m sorry,” but I could barely even hear the words.

The ambulance arrived moments later and rushed her immediately to the Bronson Emergency Room over on John St. I know the doctors worked hard to save her, but she couldn’t hold on.

That night, I realized that Andromeda had paid the price because I had stopped fighting Cheddar. I started writing my legislators and the auto regulators to make my voice heard. First, I started weekly, but then I increased my efforts. Ultimately, they set a hearing, and I went to Lansing to ask the questions that needed asking: why are companies like Cheddar even allowed to operate driverless vehicles on the public road at all – safety driver or no?

And can you believe it? The day before the legislative hearing, who should appear at my doorstep but Mikel Thurston-Griffith and that ghoul engineer from Cheddar. Oh, and of course the company’s lawyers. Two of them, all dressed down in khakis, like their suit would upset me. (Actually, their suits do upset me, because of the abuse of workers in the East Asian garment industry. But the same workers make those chino pants, so…)

Thurston-Griffith had an offer for me that they thought I couldn’t refuse: money. A lot of money, really, for a part-time grocery worker, part-time bookseller, part-time artisanal caseiculturist. All I had to do was agree not to sue *and* not to testify at the hearing the next day. Don’t get it twisted, sister: I would rather lose my apartment than

dishonor the memory of my child. I was not to be bought. I went straight to Lansing and told the legislature what happened to my baby girl.

And then, of course, I watched as Cheddar gave its two-faced apologies and flimsy explanations and the legislators ate it all up, because Cheddar creates X many jobs and automobiles driven by humans kill Y many people or whatever. So I guess Cheddar gets to kill again, and again, like that robot in that movie that kills people, the Predator or whatever. I don't know; I don't watch studio films. But there will be sequels here, too.

There was no justice for me in Lansing, but there will be here. Only yesterday, my sweet girl was alive and thriving. But now yesterday seems so far away. For me, forever, yesterday is just a memory and tomorrow is a nightmare I can't escape. I know that my Andromeda will not be the last person sacrificed on the altar of capitalism, but when the Revolution comes… well, we're not going to take it anymore!

STATEMENT OF CHIDI RANSFORD

My name is Chidi Ransford, and I have lived in Kalamazoo for almost ten years, since I came here as a grad student at SSU. I was one of the Program Engineers on the Colt project, and I am here to atone for our sins in the Colt's design. I escaped my homeland in 2008, and I received my bachelor's degree from the American University of Beirut (AUB) in 2012. You see, where I was born, there is very little tolerance for difference. Many individuals face discrimination, for their faith, for their sexual orientation, or for their gender. Which one or ones I suffered do not matter; I stand in solidarity with my brothers and sisters.

Still, I was one of the lucky ones. I made it to Lebanon, and then I was able to earn a scholarship at AUB. All of the classes at AUB are in English, and when I finished my undergraduate degree in electrical engineering, I was able to obtain admission to Superior State University, here in Kalamazoo. I started in the EE department but quickly found that my interest in control systems would be better served in the Computer Science department. I received my Master's in Electrical Engineering, switched programs, and graduated in 2017 with a Ph.D. in Computer Science.

As I was finishing my doctoral studies, I saw articles on MLive that Cheddar was hiring. They were paying well, above the average for new graduates, and I interviewed with Micki Thurston-Griffith! Ironically, I don't think it was my systems design skill that won me the job as much as nostalgia. Back home, my family drove an ancient Cheddar truck from the '30s, and we spent the whole interview talking about that! I did not mind, though. I got the job, and with it the path to becoming an American citizen.

Unfortunately, that path has become somewhat more complicated in the last couple of years. In December 2021, a few months after I was fired from Cheddar, I joined Raytheon Technologies as a Program Manager in the control systems division for the Coyote swarm drone. They were very interested in the software I had designed for parallel processing of sensor inputs on the Colt. But when I requested that the source code I developed at Cheddar be returned to me, Mikel Thurston-Griffith refused to do it, in direct breach of my agreement with Micki when I was hired, which was that I would own my own code. Micki refused to honor the terms of my arrangement, and I had no money to pay an attorney or time to wait. After all, I had just been fired, and I needed the source code to get the job at Raytheon. Being an immigrant without a job is very risky! Luckily, I knew that Micki was not detail-oriented and likely would not have deleted my user profile. So I used the same login and password I was legally issued back when I was an employee, and it still worked. Next thing I knew, I was being arrested by the Secret Service for computer hacking, when all I did was retrieve code that was *my* property. Micki is the thief, not me!

My lawyers and I moved to dismiss the charges, but the trial court denied the motion without even holding a hearing into whether I had an agreement with Micki. I was left with no choice but to plead guilty to computer hacking, but I did so subject to my right to appeal, meaning I agree that I did access the code when I was no longer a Cheddar employee, but I disagree with the trial court that it was a crime. I had an agreement that allowed me to have that code, and I didn't take – or even touch! – anything else. I have appealed, and I am confident that the Court of Appeals will vacate my conviction entirely or at least vacate it to order the trial court to hold a hearing where I can show that I had

the right to the code I took. That's why Raytheon is standing by me, and notice, Micki hasn't sued *Raytheon* to get the data back. The reason is simple: Micki knows I didn't steal anything; the code was mine, and Micki knows that Raytheon's lawyers would prove that if they're given a chance. Micki prefers to use the government to do the dirty work rather than have a fair fight. But once I am given the process I am due, I will be exonerated. And once my name is clear, I can restart the citizenship process.

Returning to the purpose of my testimony, I started working for Cheddar Autonomous Vehicles in 2017. My job was to work alongside the other Principal Programmer, Max Kamman. Max focused on the Artificial Intelligence (AI) processor and coding; I focused on the control systems processor (CSP) and the sensor integration unit (SIU). Basically, Max built the part of the Colt's brain that considered what to do, and I built the parts that gave it information and responded to its decisions.

I'll tell you what I told that Cheddar Review Board committee after Andromeda's death: what happened on April 17, 2021 was no shock to me. We had pushed the Colt too far, and the budget cuts were unsustainable. Something had to give.

We hit three major issues from 2018 to 2020, and any one of them could have caused a Colt to just keep going on the day of the incident. First was the simplest: we were too cheap to install a LiDAR (light detection and ranging) device, as I demanded. The AI can rely on LiDAR even if (or when) the primary, optical system has an error in collision detection such as the camera getting blinded by the flash off a window or cell phone. The Colt has plenty of sensors and cameras, and I did my job integrating them. But most systems use some form of redundant crash detection, like LiDAR.

I proposed a LiDAR build in 2019, but it would have required not only purchasing the LiDAR devices themselves but also staffing another two Control Systems Engineers – one in my unit, one in Max's – to solve the computational issues from having another set of inputs. And it probably would have required upgrading the chipset again. I sent a memo in about its value – well-researched, over a dozen pages – but I got back a simple email from Micki: "Denied for budgetary reasons."

The second issue was the continuous active updating in the AI. In theory, that could be a good idea, but it was causing glitches. Think about your own consideration of a meal. You go to a restaurant thinking you want one thing, then you see the menu and want something else, and maybe you can't decide, so you get a third thing. One you didn't really want. Continuous updating can be great – if it makes you pick the second meal you really wanted. But if the first meal was actually what you wanted, you'd much rather have never looked at the menu, and "continuously" updating from the second meal to the third meal reduced your overall happiness.

I understood that Micki felt differently about that. Micki always wanted to debate things, discuss them endlessly, find the "right" decision. Heck, Micki would probably even argue there was no one right meal or something. But that kind of continuously updated processing has costs. Imagine if instead of choosing a meal and ordering, you had to sit for twenty minutes and consider your choice every minute, fresh, based on how you were feeling at that exact moment, what looked good walking by to be served to another table, and so forth. You'd be working hard all the time to do something simple, you'd get exhausted, and you'd probably make mistakes based on bad information in the moment. That's what I feared the Colt was starting to do.

And it only got worse with the supply chain issues. Our processors were running at near their engineering maxima almost all the time, just to keep up with the inputs from the cameras, make decisions, etc. In mid-2020, we upgraded the cameras, and the higher resolution really started taxing the processors. We even started running above the design maxima, which increased the risk of the processors overloading and failing. We asked for the highest-quality new processors, but there was no room in the budget for them. Indeed, we were already laying off Maintenance Engineers, and when we lost two of our Control Systems colleagues, Micki told us to make up the lost time working late nights and weekends. This kind of "crunch" is common in software development, an accepted business practice, but that did not make it easier on us!

Eventually, the demands got so great on the processor that we had to start introducing parallel systems to cover some of the computational load. Parallel systems are complicated, but think of them like one computer chewing some of the food so the other would not have to work so hard. Still, these computational systems are known to have issues, bugs that arise in odd circumstances, because unless you do things perfectly, sometimes the second processor won't understand the first's inputs or will receive them differently than if it was doing the full computing load itself. There are some fascinating articles about these issues in the Communications of the Association for Computing Machinery ("CCAM"), and I have an article on the topic I published as a graduate student there, but unless you have a degree in computer science, it is hard to understand. The point is, we knew that using parallel systems was not a perfect solution. So we did laboratory testing, and we did some cloud simulations, but we had no real-world testing going on except what was happening on the streets.

And even so, our processors still ran hot. That's not good. There are three enemies in computing: moisture, dust, and heat. Of these, the hardest to eliminate is heat. Think of your computer at home, with those fans running in it. If the fan does not work, you are in trouble: without the fan to help dissipate heat overload, the computer begins running hotter. But computers running hotter are less efficient, so you need more processing power to get the same work done. And of course, adding more processors introduces more heat into the system, and unless you dissipate that… you can see. We even had a maintenance person reach out to us because some of the carpet around the processing unit in the trunk of some of the Colts had melted. Max's solution was to remove the carpeting.

Basically, if you are running hot, that means you are running your system over engineering tolerance routinely. Engineers build in a tolerance for peak moments, so things do not break at exactly their planned load. But it is unwise to be at peak very often. The margin is for safety, after all! And it's definitely possible that running processors above redline routinely will wear them down. We did not have a testing protocol for that, and when I raised the idea, it was shot down. We were too busy on the other issues.

Regardless, hot processors are both less efficient and more prone to critical failure, especially if they are overloaded with input or computational tasks, like when a continuously updating AI faces an unexpected scenario and has to search its databanks and process its reaction scenarios at the same time. Parallel processing reduces that load, but again, when your parallel systems are *also* running at redline, there's a real danger that the system overloads or glitches out entirely. That can happen all at once, or it can be a domino effect, as the first processor fails, then its glitches cause a cascading

failure in others. I built the system with software fail-safes to reset in cases like this, but even a quick reset and realignment takes time, sometimes a second, sometimes even two before the system is completely restored and can start processing inputs and making decisions at full strength again.

I suggested to Max that we go to Micki together, because it was a safety issue, but Max told me that Micki was concerned that I was a negative influence on the team and that my complaining was hurting morale. Plus, Max pointed out that we were not actually above engineering specs – which was true – and we had not seen issues in the field. I convinced Max to order more advanced processors in the 2021 budget, but the supply chain issues – and the crypto miners eating up the high-end surplus market – meant that we would not see them until July 2021 at the earliest. I was still worried, and I expressed those worries, but Micki had already made Max the Head Designer, and I could not afford to lose this job. So from October 2020 until that day in April, I just held my breath when the Colts went out the door. I'm pretty sure we all did.

And of course, there were the safety drivers. I had concerns about that program: they were mostly college kids, barely out of high school, and they were hardly responsible. Many would not show for work, and that meant other employees had to fill in. And when they did, Lord only knew what they actually did while in the vehicles. I suggested we install cameras or make spot checks, but I was shot down on that, too. The worst of the safety drivers was Rae Tucker, with whom I had to work on that silly social media series. Rae wanted to film my day of work, which was mostly coding, which seemed to upset Rae. Rae kept demanding I do "cooler" things. Eventually Rae left, face glued to that tablet-sized phone, as always. At least Rae was not disruptive, unlike some of those

drivers. One almost had a heart attack over hitting a chipmunk staring at its own reflection or something. Like we didn't have enough processing problems without worrying over every narcissistic rodent in Michigan! Fortunately, Max got rid of that person.

I remember April 17, 2021 pretty well, of course, in retrospect. At the time, none of us knew anything had gone wrong. We just knew that late that afternoon, a team of lawyers came to the building and pulled us into offices. It was scary; we couldn't even bring cell phones. They asked us a lot of questions and took control of all the servers, locking us out of our own systems overnight. I'll never forget as I left the office that night, I walked by that little Colt on the flatbed. There was what looked like blood on the hood.

I knew from all the interrogations that something horrible had happened, but it wasn't until that night – from former colleagues on LinkedIn – that I heard what had occurred. I knew that I had the absolute responsibility to tell what I knew. So when the Board Committee came to speak with me, I presented a complete explanation of the past 18 months and what had gone wrong.

After I did, I knew I was in trouble at work. No one would look at me. Even Max treated me like I had COVID or something. It was clear to me that I was being distanced. Over the next few weeks, I started to get emails criticizing my work, and people started watching the times I came and went. I even was reprimanded for taking a one-hour lunch, instead of a half-hour… when I was working twelve- and fourteen- hour days! I mean, most days. Occasionally I was out of the office for a day or two with a cold or whatever. I didn't document the sick leave or vacation time in accordance with company policy, but I shouldn't have had to when I was working nights and weekends. We all were, pretty much from 2018 on. It was a wonder none of *us* crashed our cars.

The sword fell on September 3, 2021. No one was in the office except a few of us coders, and Micki called me downstairs. I passed three Security officers coming up on the way, and I knew what was up. Micki fired me, "for cause," based on a "negative attitude" and "repeated violations of company policy." The real reason was that I told the truth. I kept it professional, but then I lost my temper when Micki refused to allow me to return to my office because they were worried I would "steal" company secrets. I just wanted the code I personally wrote, my intellectual property. I reminded Micki that our agreement said I owned that, but Micki went nuclear, screaming about how I admitted I was a thief and that was more grounds to fire me. Later, at my criminal pre-trial hearing, under oath, Micki "didn't remember" our conversation when I was hired. I doubt that's so; Micki has a great memory. Micki just doesn't want others to know we made a deal that was bad for Cheddar, because Micki – the rich kid who inherited the family business – is very sensitive about being perceived as a bad businessperson.

People think I'm bitter about Cheddar, but nothing could be further from the truth. If anything, working as a manager at Raytheon has given me more sympathy to the challenges that management faced. Now that I have to manage to a strict budget, I understand Max's decisions better. I am no longer as frustrated about Max turning down safety testing of the processors, for example, and I have put my own employees through "crunch." I hate to admit it, but I even understand the choice not to put LiDAR in the Colt better now, having had to satisfy my own clients' aesthetic, marketing, and budgeting realities. I don't agree with it, but I no longer think it is a no-brainer. Hard decisions are a part of management. But you have to put safety first, and when you don't, you have to

accept responsibility for the costs of your decisions, even the human costs. If you are not willing to pay for the harm your choices cause, you should not be in that line of business.

Anyway, I'm not bitter at all. I was even approached by a prosecutor about helping me with my hacking charge if I could testify that Cheddar was lying. I would not do that, though, because I don't think they're lying, except maybe to themselves. It's not a question of honesty. They just don't get it: Andromeda Johnson is dead because of us, and we will all carry to our own graves our responsibility for the decisions we made.

STATEMENT OF DERRY JETER

My name is Derry Jeter, and I am the Director of State Programs for an organization called Fighting for Road and Highway Safety. FRHS is a collaboration of national health, safety, and consumer-based insurance and trade associations that pushes for federal and state laws, policies, and programs to prevent motor vehicle crashes. I have worked on road safety for most of my career. I graduated from Rutgers College and Virginia Tech with a focus on driving innovation and automotive mobility, safety, and technology. During my Ph.D. studies and as a post-doctoral fellow thereafter, I worked as a researcher for the FIA Foundation in London. FIA is the world's leading non-profit supporting innovative global safety philanthropy and high impact strategic advocacy in the areas of road traffic injury prevention and fair, sustainable mobility for all. I stayed with FIA through 2004, before returning to the States to work for the Governors Highway Safety Association ("GHSA"), a 501(c)(3) nonprofit representing highway safety offices that implement federal grant programs improving highway safety. (My full CV was provided to counsel.)

To be clear, while there were periods of full-time or near full-time employment with each institution, most of these appointments are part-time or consulting-style work. At least half of my income in most years comes from Next Generation Safety (NGS), the automotive testing and engineering facility I helped found in 2007 in Blacksburg, Virginia. NGS doesn't just use crash test dummies or basic computer modeling; we employ an entire team of computer engineers – most of them Virginia Tech externs or work-study students, to keep costs down – and maintain a 40-acre facility set up to emulate dozens

of real-world conditions across hundreds of scenarios. For a company with the budget for it, we can even simulate a full city block packed with pedestrians.

Of course, given my broad range of experience, I have also been engaged as a consultant on numerous transportation and public policy issues including occupant protection, impaired driving, teen driving, distracted driving, consumer protection, motor vehicle and commercial motor vehicle safety, and autonomous vehicles. I have testified on several occasions as an expert witness in court on these issues, although my work is primarily as an engineer and tester in commerce, not litigation.

I first met Cheddar Autonomous Vehicles CEO Mikel Thurston-Griffith five or six years ago, at the North American International Auto Show, better known as the Detroit Auto Show, *the* premier automotive show on planet earth. I was part of a panel on autonomous vehicles, and Micki cornered me afterward to discuss Cheddar's ideas for the Colt product line. Two things struck me immediately. First, Micki had a lot of money to spend on this little project. And second, Cheddar had no freakin' clue what they were doing.

I have reviewed the statements in this case, and the exhibits, and, of course, I have experience with both traditional and autonomous vehicle design and testing. Cheddar made two critical errors in their initial design of the Colt, both squarely because of Micki's obsessions. First, Cheddar built the Colt with continuously-updating AI ("CU-AI") instead of simply using rules-based systems. Only a visionary or a fool would do that; engineers and computer scientists simply do not have the level of sophistication needed, yet. CU-AI systems learn faster and better, becoming more flexible than traditional rules systems, but that sophistication comes at a cost: they also encounter

unexpected bugs faster. I have only limited direct experience working with computer software design, but when I told a couple of the Ph.D. candidates from the CompSci department about Cheddar's in-vehicle AI, their eyes almost fell out of their heads. Based on what I've read about them in industry magazines, the sheer complexity of those systems is incredible, and the processing power needed for that kind of work is intense, which is a reason most people doing CU-AI systems use cloud servers or massive data farms that have that kind of juice and can pull in extra processing resources when needed. Doing it on the road, in real-time, with fixed-power hardware? I respect the ambition, and it's definitely something we all expect to see in the next ten to twenty years, but as far as I'm concerned, the technology just isn't there yet.

Which is a reason the second mistake is so critical. Almost every company building AVs puts a simple fail-safe into them: if the computing fails for a defined period of time – usually in the ballpark of a second – the vehicle brakes. Some folks program theirs to brake slowly at first, others brake hard right from the start. Either way, if the vehicle is blind, it's better to have it stopping than to have it moving but unable to respond to events occurring around it.

Cheddar didn't do that, basically because Micki's brother died from a vehicle braking too fast. But that's bad statistics, and therefore bad design: you don't make a decision based on one bad outcome. There's nothing wrong with swinging for the stars, but when you're letting emotion and philosophy drive your engineering decisions, well…

Of course, if Cheddar had made those mistakes but tested and programmed the Colt perfectly, it might still have pulled the project off. But in CU-AI, testing matters even more than it does in rules-based systems. The dream, of course, is an AV that will react

faster and more consistently than a person. But to reach that point, the CU-AI has to be trained as well and as completely as possible, to "learn" in a realistic environment, with safety assured for all participants, so that when it encounters similar things in the real world, it has seen them before and decided what to do. In this way, they're like people. The first time you encounter something new, you have to think about how to handle it. After you've seen it fifteen times, you have developed the experience to react reasonably by comparing the fifteenth time – subconsciously – to those that preceded it.

That's why NGS exists. The more exposure to real world scenarios you can give your AI "brain," the better the data, and the better the AI's ability to respond based on its experience. If you hire us, when we're done, you'll know how your vehicle handles rain, sleet, and snow, how it performs in daylight, clouds, and at night, how it drives in the crowded city and the plains of Indiana. And the greater the verisimilitude – the more like the eventual circumstance the AI will face the training is – the better. That's why soldiers don't just deploy to war zones after a couple days on a clear, well-lit shooting range; they train to shoot in real-life scenarios, in close spaces, with smoke and loud noises.

In 2020, I told Micki I could help make sure the Colts were trained up right. I saw on LinkedIn and Indeed that a few Cheddar safety testers had been let go, and so I invited Cheddar to retain NGS for its testing work. Would it have been expensive? Yes. Would it have made me personally a lot of money? Also yes; I'm the Marketing Director at NGS, so I get a cut of all business I bring in. But NGS's testing really is at the cutting edge on technological assessment *and* our simulations are first-rate, real-life stuff. But I never got a response from Cheddar.

Given that lack of AI training, I was shocked the AI worked at all, much less worked as well as it did those first couple of years. Cheddar's error rates were surprisingly low, and it had no fatalities. Of course, the Colt was not used *that* much during the pandemic, but even so, Cheddar got closer to the CU-AI dream than anyone expected.

And no, there's no 100% guarantee that NGS's testing would have saved Andromeda Johnson; that's not how science works. But had Cheddar just purchased the Full-Service Simulation Package, we would have run "Homecoming Weekend," our simulation of a busy city street, with people weaving in and out, drunk kids cutting across outside intersections, and the like. Do you think that Colt's AI might have benefited from training like that on April 17, 2021? I certainly do.

Unfortunately, while there are a variety of views on how safe AVs should be before commercial deployment, states like Michigan and companies like Cheddar have made the decision to accept risk and uncertainty in the short and medium terms to see the long-term benefits – and immediate profits – of the AV technology. I guess that sounds reasonable to some, but to a safety engineer, it seems like human experimentation!

And *of course* even if you accept some risk, companies have to be safe, not take legislative authorization as a blank check to act unreasonably. Safety drivers are a widely accepted approach, but as the collision in question shows, they have serious issues. The Event Data Recorder (or Black Box) information that was retrieved from the AV indicates that the AV issued an alert in the system requesting that the safety driver take control only 1.25 seconds before the collision. That's not enough time for the human being to examine the situation, engage the fail-safes, complete disengagement, and issue vehicle commands manually.

What's also interesting is that the safety driver, Rae Tucker, appeared to have noticed a problem, because the log shows a manual query was made of system status. A "function" query – as in "are you functioning OK?" – should be the system's first or second highest priority, since by its nature a function query reflects a concern by the safety driver that the system is not, in fact, operating properly. It should be answered very quickly. But Tucker was entering the function query a second time when the alert went off, meaning there was no response to the first. At that point, it was too late; the collision would happen within a second and a half. It takes most people half a second or more to process events, and then another half second to react and engage the brake, *before* the vehicle even *starts* to slow. The authorities were right not to blame Tucker for the collision; by the time the alert appeared on screen, even an attentive safety driver likely could not have prevented the collision.

That makes me strongly suspect – conclude, really – that the AI had what programmers call a "systems conflict," which should be just about the only thing that can delay a function-query response that long. In lay terms, the parallel processors were running, and the input to the camera system on the side of the vehicle toward Andromeda went from normal to a stream of junk data almost instantaneously, three to four seconds before the collision. Maybe there was a loose cable. Maybe the cameras all got blinded simultaneously somehow. Maybe the parallel processor failed and started spitting out junk. It's impossible to reconstruct. But for whatever reason, for over a second, the vehicle input data from the front passenger side spiked in a way the AI had not seen before, so it began querying the camera system. This happened quickly, but the CU-AI is not a pure, rules-based system. Its default was to use what data it still had and to keep

going while it figured things out, not to begin braking. But lower-speed collisions are much less likely to kill, so delays in braking can be fatal.

So I guess I should wade into the LiDAR debate here for a minute. Some experts think every AV system should have LiDAR backup for its camera systems. Some other experts – including those at Tesla, the world's leading AV maker – think they should not or, more accurately, that LiDAR is unaffordable right now. (The price is dropping significantly, but for 2021 it was still un-economically high, in the range of $50,000 or more per vehicle with LiDAR.) State legislatures seem to agree; Michigan does not require LiDAR for its AVs, for example. So I'm not going to sit here and say that not having LiDAR would be unreasonable. Franz vol Holzhausen would kill me *and* my business.

The primary disadvantages of LiDAR are (1) its high costs; (2) its inability to measure distance through heavy rain, snow and fog; and (3) its appearance… a LiDar unit is not esthetically pleasing, at least in the eyes of some. Those all matter if you're trying to sell a car; no one will pay $100,000+ for a vehicle that people don't like to see at the curb and that won't sell in the Pacific Northwest!

But LiDAR *is* valuable. LiDAR was developed for measuring distance, but it can detect objects consistently when a camera is blinded by road glare or headlights, and its inputs require much less processing power to interpret, leading to quicker decisions and less burdened processors. Some have suggested that Cheddar did not need LiDAR, because it had ultrasonic sensors. That's simply wrong. Ultrasonic sensors detect object proximity using ultrasonic waves, instead of light, so they help with object detection, but only at ranges of fewer than 8 meters (~26 feet). At 25 miles per hour, a vehicle travels 36 feet per second. By the time that the Colt's ultrasonics would have detected

Andromeda Johnson in the intersection – assuming she was even in the intersection – it would have had less than three quarters of a second to engage the brakes and stop.

Because ultrasound is effective only at such short ranges, most manufacturers have the brakes engage automatically if the ultrasonic system detects a collision is imminent. But for some reason, Cheddar ran the ultrasonics through the AI system like any other input. In theory, that makes sense, and in the long term, AI processing will someday lead to better decisions. For now, though, it just slows the process of braking.

Even without camera visuals, the AI knew that an ultrasound warning meant that the vehicle was near a person or object, and it began to react swiftly, reasonably, to the ultrasonics. But because of Cheddar's design decisions, the ultrasonic signal had to reach the (parallel) sensor system, the system had to process that signal and pass it to the main (AI) processors, the main system had to process it and decide to engage the brakes, the brakes had to engage, and the vehicle had to begin decelerating. It did, but not in time to save Ms. Johnson.

After I heard about the collision, I reached out to the Cheddar Motor's CEO to offer my services in helping the company to analyze and synthesize the information from the accident. This tragic event could have been used to increase the safety of AV technology. But Cheddar declined my participation, and my fee.

In essence, Andromeda Johnson is dead because the Colt did not stop in time to save her. Tenths of seconds matter in deceleration events, especially fatal ones, because each moment in time represents a slower speed at impact and, thus, a lower likelihood of a fatality. But Cheddar's decisions actually slowed the Colt's reaction, not quickened it.

For example, I reviewed the suggestion to purchase advanced chipsets for the Colt vehicles to allow a single processor to handle all inputs. Had that suggestion been taken, the system would almost certainly have responded faster, or maybe never failed in the first place. That would more likely than not have prevented the collision or reduced its speed so markedly that it would not have been fatal.

And yes, Ms. Johnson may have been advancing into the intersection without the right of way. But as an AV designer, you have to anticipate that people will make mistakes. Cheddar did, to a degree; the AV's Object Detection system would normally have seen her and engaged its brakes to avoid hitting her. But on April 17, the main AI was half-blinded and/or in a processor meltdown. Rules systems don't have this kind of failure: if a situation doesn't have a clear rule, they are programmed with a default rule that is triggered every time. In most cases, that means slowing down, either gradually or suddenly. Simple, but effective: a rules system is never lost in contemplation. But according to what I've read in industry publications and peer-reviewed journals, a CU-AI can be. A CU-AI has to think things through, and if the processor isn't functioning properly or is running slowly, that takes time. Rarely, mind you, but it's a known risk, one companies decide to take in order to – ideally – get to better decisions overall. So had Cheddar put in a priority rule to engage the brakes when the ultrasonics triggered or – for the love of Pete! – just used a rules set instead of an AI like the rest of us, that would have meant the Colt reacted more quickly, more likely than not quickly enough to decelerate or stop entirely. (It's impossible to say with certainty; one would have to know each component to calculate with engineering precision.)

And Lord only knows what *additional* risks parallel processors might cause beyond those I've listed; I'm a safety engineer, not a computer scientist.

Of course, an AI will eventually decide to brake, too. It will figure out that it has been going too long without input and decide that braking's now safest. But because it requires contemplation, for lack of a better term, a CU-AI will make this decision more slowly, because rules systems just choose what rule to follow. That's a simpler choice.

In my opinion, while Cheddar "checked all the boxes" to qualify to deploy on the road, that's only because the legislative process has been corrupted. Cheddar is a significant donor to campaigns and a major employer, and it throws that weight around to make sure that the laws are not too strict. You have a company and a regulatory framework that is valuing technological advancement above the safety of human lives. In that scenario, society never wins, and that's why you can't rely on a minimum legislative standard to determine what is "reasonable."

In my opinion, it was unreasonable to use continuous-updating AI at all, given the state of the current technology; doubly unreasonable to use it with only the processing power standard on the Colt, when you're forced to increase the risk by relying on parallel processing; triply unreasonable not to put in an automatic stop on the ultrasonics; and massively unreasonable *at least* if you're going to do all that not to use the best testing facility on G-d's green earth, NGS, to test the Colt in the most realistic way possible. It is impossible to say which specific of these errors alone would have led to Ms. Johnson's death without the others. But collectively, within a reasonable degree of engineering certainty, they combined to kill her. More reasonable decisions by Cheddar would have

led to the Colt decelerating sooner, and Andromeda Johnson would be a poster child for the safety of AVs rather than the proof of their nascency.

Hopefully once Ms. Johnson's poor parent takes Cheddar for all it's worth, companies will see the value in NextGen. And if not, at least the $25,000 I've been paid on this matter will help keep the doors open for another few months.

STATEMENT OF MIKEL THURSTON-GRIFFITH

My name is Mikel Thurston-Griffith, but everyone calls me “Micki.” I’m the fourth Thurston-Griffith to bear the name, but my grandfather was called Mikel and my mother, also Mikel, chose “Mike” to differentiate them. I chose “Micki,” because I’ve been a fan of Walt Disney for as long as I can remember. I am a Vice President of Cheddar Motors, the world’s largest privately-held automotive company, and the CEO of its subsidiary, Cheddar Autonomous Vehicles, Inc.

Cheddar Motors has been going strong for generations. How are we still making it work? By keeping it in the family. The Thurstons descend from passengers on the Mayflower, and we acquired the company in 1888, in the early ages of automotive ingenuity, for the tidy sum of $14. My ancestors were quite the businesspeople and, depending on who you ask, the most innovative, open-minded pioneers in the auto industry. They carved a space distinct from megalomaniacs in Detroit by moving The Cheddar Motor Carriage Company to Kalamazoo in 1919, and it has been an integral part of the city ever since. Ironically, the business was built not on autos but on airplane engines for Britain and then the Army Air Corps during the Great War and then World War II (hence the name change to “Cheddar Motors” and the iconic logo). After the war, we became the sole manufacturer of the iconic Cheddar Yellow Taxicabs, prioritizing manufacturing locally, so that we could provide jobs to the people of Kalamazoo. When my great-aunt secured the contract to be the exclusive supplier of vehicles to the city fleets of New York and St. Louis, we really took off.

Unfortunately, the 2008 recession and subsequent rise of ride-share businesses, caused a marked decline to our bottom line, one my older brother and only sibling, Jonathan T. Thurston-Griffith (whom we all called “J.T.”) was struggling to address when he was killed in 2009. As I understand things, he was driving his Stallion – that’s Cheddar’s top-selling sports coupe – around an S-curve when he collided with the rear of a car that had braked suddenly to avoid hitting a bog turtle in the road or something. We were devastated, of course, but we understood why the driver stopped; the Binder Park Zoo has a Thurston-Griffith wing because our family loves animals! After J.T.’s death, I was recalled from academia to join Cheddar.

I was serving as a junior professor at the University of Hawaii in Applied Philosophy at the time. I have two masters degrees, you see, one in Philosophy from Michigan State that I received on my way to my Ph.D. from the same institution, and an Executive M.B.A. that I received through online courses at Michigan Ross (the University of Michigan’s Stephen M. Ross School of Business) after I returned to the company in 2011.

I suppose the gap in time between J.T.’s death and my joining the company does require some explanation. My brother’s death was devastating to us all, and I initially did not intend to come back to Kalamazoo – or Cheddar – even after J.T. passed. But then I was teaching the Trolley Problem – the famous thought experiment designed by Philippa Foot in the late 1960s based on the work by Sharp, Engisch, and Karelitz (among others) to test moral philosophic decision-making – and it occurred to me that I might have a real chance to make a contribution at Cheddar.

You see, while I tried to decline taking an executive position, I had a paid position on the Cheddar Board of Directors. I knew from our meetings that other manufacturers

were working on automated cars, and from the reports, they were all settling their fail-safes to stop the car immediately if there was any kind of computer glitch. But I knew from my brother's death – and from the Trolley Problem – that stopping the car abruptly doesn't make sense in every case. A sudden, violent stop can kill people just as easily as saving them. Autonomous carmakers weren't aiming high enough. Vehicles could actually solve the Trolley Problem in real time, always minimizing risk to life or limb. After all, computers react faster than humans, and they don't have mechanical limitations in their ability to translate their thought to action (like the time it would have taken my brother's brain to signal his foot to press the pedal to activate the brakes before the brakes even *started* to slow him down).

To be clear, even though I was a professor, I wasn't *totally* unprepared for the business world. In college, I had actually double-majored in Philosophy and Computer Science (back then, my passion was formal logic). And between college and grad school, I worked on the Hill for the Senate Judiciary Committee and the House Energy and Commerce Committee. Between those experiences and the crash course in the business I got in my first few years, working full-time during the day and getting my M.B.A. nights and weekends, I rose to the role of Executive Vice President fairly quickly. My mother was delighted by my progress, and she made it clear that she expected to hand over the reins once I proved myself.

Not that there was a lot of competition to lead Cheddar at that point in 2013! Our city contracts were long in the rearview, and our product lines were just not competing well enough with Ford or GM. So as I gained power within the company, I pushed an innovation agenda, cutting manufacturing to only two or three core lines. It was a difficult

decision for the people of Kalamazoo, who saw a lot of hardship in the form of lost jobs. But it offered a tremendous opportunity for engineers, computer scientists, and entrepreneurs, and I was able to work my connections on the Hill to obtain some development grants, because our efforts were eco-friendly and high tech.

In the early 2010's, there were three things on the cutting edge of automotive minds: electric vehicles, autonomous vehicles, and ride-sharing. But ride-sharing was a service proposition, and other than making our cars attractive, there wasn't much we could do there. The electric sector was packed; it had been attracting attention (especially from venture capital) for more than a decade, while my mother and her generation of leaders focused on building muscle cars that get 20 mpg. We were just too far behind the curve; it made more sense to license that technology than develop it.

But we *needed* an influx of cash, and we had to show something to investors that was going to matter in 2030. My mom could get lost in the subtleties of each year's Stallion redesign, but she could also read a balance sheet; the market for gas-guzzling nostalgia wasn't going to keep the doors open. So when I came to her with the idea of next-leveling the other autonomous vehicle manufacturers, she was willing to give it a shot.

And I do mean that: we got a shot. It wasn't some handout for his kid or whatever; the program was capitalized as a Cheddar subsidiary – Cheddar Autonomous Vehicles, or CAV – with a real budget, real targets, and real oversight. This was my chance to prove myself, yes, but the standard of proof was going to be rigorous. CAV would get no help from Cheddar Prime; we would sink or swim based on the success of the Colt, our Autonomous Vehicle Prototype.

First, we acquired bundles of patents and licenses around the software for autonomous vehicles. 2015 and 2016 saw CAV grow in exciting ways: several more licenses and more rounds of venture capital funding. But the biggest challenge we faced – and surmounted – wasn't hardware; it was software.

You see, what made CAV's effort so ambitious is that we weren't content to just set simple "rules" for the Colt to follow. First off, I knew from the Trolley Problem that such rules are hard to write, morally speaking. Sometimes there just aren't easy choices. And second, with other companies – ones in better financial shape than CAV because they were founded by billionaires with family money – aiming in that direction, competition would be too steep. I knew that the ultimate goal for AVs would be an artificial intelligence unit working within the trunk, continuously updating its information, "learning" if you will to be a better driver. If we could beat our competition of the world to that, we would own the AV market. And if we couldn't, well, we were dead in the water anyway. I was confident it was a winnable race: no one else was even trying for standalone CU-AI.

So while other companies focused on improving by tiny increments, we took a home run swing. I pillaged Michigan's Ph.D. programs in engineering and computer science for the best and the brightest, and I put them in a lab we called the Wolverine Works, after the famous Lockheed "SkunkWorks" facility, on the campus of Superior State University in Kalamazoo. For two years, they wrote some of the most evolved code anyone had ever seen in the applied AI realm, and I wrote right alongside them. Thurston-Griffiths lead from the front!

By 2018, we had a patentable product (or, in this case, a patentable product and a software copyright), our first patent on an automotive part since 1899!

The process of making this vision a reality has been quite the saga. Every step of the process requires meticulous quality assurance and quality improvement. It requires a dedication to excellence and a deference to safety, even when it costs more time and money. The state and federal government regulate us with a heavy hand, and rightfully so. I was telling my grandfather about the reports I had to send over to Lansing the other day, and he laughed so hard that his dentures flew out of his head and onto his chiffonier! Keeping Lansing, D.C., and the multitude of trade and safety agencies within arm's reach does have its advantages: I was heavily involved in the debate and drafting process of the Safe Autonomous Vehicles (SAVE) Act, the legislation that allowed us to launch our pilot program and beta-testing on the campus of Superior State University in 2017.

Unsurprisingly, the collaboration with SSU and our R&D division was extremely fruitful. 2018 was rough, as the Colt really struggled to learn, but as we got further along, it really began to impress us all… and stopped hitting things… and animals… and test dummies. Our Level 3 vehicle that debuted on SSU's campus was such a roaring success, that we began preparing our application for Level 4/5 approval on the same day that we secured our Series D of venture capital funding. We added over a hundred more jobs in the Kalamazoo economy in manufacturing and maintenance, on top of those we had already added in Research and Development. CAV was on the cusp of greatness.

Unfortunately, though, greatness has costs, and sometimes those costs compound. There's no question that continuous-learning AI was the way to go, but the processing power for computers capable of handling that effort in real time was massive. Some members of the team wanted us to just collect data and process it at the facility, at night, or in the cloud. But you don't get to the end zone four yards at a time; you gotta

throw deep! By having our vehicles continuously learning independently, on the road, we could compare their experiences at the end of each work week and see what conclusions they reached. That saved us millions of dollars in expensive laboratory space at laboratories testing hypothetical situations. I received an unsolicited offer for testing from a person I met once at a trade show in 2019 that quoted more than five million dollars if we wanted to test our vehicles with them—FIVE MILLION DOLLARS! Instead, we were able to test and learn in the *real world*. It's like Plato's cave: who would choose to observe the simulation in the shadows when you could just look up and see the real thing?

Of course, Superior State (and Michigan) required that we have a backup driver in every car as a safety net. Through 2019, they were busy, as the vehicles learned and our AI evolved its learning, but by 2020, each driver was averaging less than an intervention per week. And our post-incident reviews showed that 30% of the time, their interventions actually *increased* the risk of serious injury. Hobbes was right; we humans really are flawed creatures.

By October 2020, we were ready to cut loose the safety net and send our vehicles out fully autonomously. It wasn't fun seeing all those tweets about how our self-driving cars had drivers. I lobbied hard and even hired a Lansing lobbying shop to help, but unfortunately the legislature did not agree, so safety drivers stayed. Thankfully, most drivers were college students, so we didn't have to pay them much.

The other major problem was scaling the computing power adequately. You see, of all the things I had foreseen in our business planning, I hadn't figured on the one-two punch of a global pandemic disrupting the supply chain and cryptocurrency miners driving the price of new microchips through the roof. (Following Moore's Law, I had projected

the prices to fall.) Pretty soon, you couldn't get a high-end processor for less than twice or three times its projected cost. That meant that we couldn't keep upgrading chipsets at the rate we wanted, and we were driven to other methods to compensate, like parallel computing. We started seeing glitches more frequently, although still within acceptable limits, of course. Lansing even looked at the data, and while we had to spend another couple days with their engineers, they eventually understood that it was fine: it was either we keep going, or CAV was bankrupt, and those jobs were gonna be gone, too.

This brings me to the tragedy that occurred on April 17, 2021. Words cannot describe the sadness that I feel for the Johnson family and all those affected by the accident. I thought that these AV's might -- *just might* -- bring the end of person-vs-vehicle accidents. But I suppose at some level we all knew a death could happen at some point as we moved toward that time. As such, we had a pre-convened multi-disciplinary review committee that included several third-party experts, including its Co-Chair, Max Kamman. Derry Jeter actually reached out to me after the accident made national news, demanding to be included on the commission (despite the fact that its members were chosen by our Board of Trustees months before the incident). Derry was quite strident and accusatory. After looking Derry up, I recalled Derry was the one who sent the offer for that insanely expensive testing. I was glad at that point that Derry was not on the review committee—Derry had a pre-determined view on the subject at hand and I am sure would have used those views to infect the review and also try to earn a few bucks slinging Cheddar's good name through the mud afterward like Derry is doing in this trial.

Effective April 18, 2021, we paused use of the Colt for thirty days to allow the investigation to occur. At the onset of the investigation, I instructed the committee that

this company is, first and foremost, not one to deny and defend: we pride ourselves on our internal quality assurance, quality improvement, and quality control programs. I have always told our engineering staff to produce the best vehicle we could, the gold standard for autonomous vehicles: smarter, faster, better than anything else. While I remained at arm's length from the committee, to permit them an unbiased review, I did extensively brief the committee and meet with them on multiple occasions during their review. And, of course, I reviewed their report before it was finalized to ensure that no proprietary information was included.

The executive summary of the committee's report is attached as an exhibit, but to summarize, the committee concluded that all key safety protocols were in place, properly maintained, and functioned as designed during the incident on April 17th, including the in-vehicle safety driver. With this report in hand, the Board of Trustees and I decided not to issue any recalls (something that my in-house counsel is constantly telling me will not reflect poorly on CAV in court) or to engage in any physical redesign. Instead, we reviewed the learning done by the vehicles to date and made certain that best practices were spread throughout the processing chain of each Colt. We also improved the parallel computing interface structure, in case that was an issue, and – with an infusion of capital in June 2021 from Cheddar Motors to cover the increased cost – upgraded the chipsets in our in-car computing systems, increasing processing speed by 35%.

We also decided to continue pursuing contracts with the cities of New York and Chicago and have even started to negotiate contracts with ride share companies. And yes, the rumors in *The Journal* are correct – Cheddar Motors is planning on filing for public listing on the New York Stock Exchange, based in no small part on the success of the

Colt program, so we will (hopefully) be relinquishing our crown as the largest privately held auto company in the near future.

I have been asked if I regret any of the decisions we made. As I told CNBC, the answer is a firm "no." We used the best technology we could, and if the computing technology glitched, well, then that's a risk inherent in what we do, and AVs are not alone; conventional vehicles have technology breakdowns as well, sometimes with fatal results. In 1955, the Hawthorne-Macklin crash at Le Mans killed dozens of people, but Flockhard and Sanderson won it right on schedule in 1956. The *Challenger* disaster grounded the Shuttle, but she flew again. So, too, the Colt. The arc of technology bends toward perfection, but the path is not always uniform.

Speaking for the Board of Trustees, we of course feel sorry for the loss of Andromeda Johnson. But we stand firm in our commitment to our workers and in our belief that our product, the world's first fully autonomous automobile, makes our society a better place. Tragically, Ms. Johnson died, and nothing can heal that wound for her family, or for mine. What is done is done. So read your Spinoza and judge us not on your perception of our good or evil but upon the effects of our actions. A life was lost, yes. Lives often are in the road to progress, through no fault of anyone's. But how many lives will be or have been saved because our vehicles were and are on the roads, instead of slow humans, distracted humans, drunk humans… or stupid, flawed humans stopping on blind curves for turtles? Quod erat demonstrandum.

STATEMENT OF RAE TUCKER

My name is Rae Tucker. I was born and raised in Kalamazoo, Michigan. I graduated from Portage Central High School in 2019. My mom and dad met at Superior State University ("SSU"), her mom was a bookkeeper for the University, and my brother and sister both attended SSU. Everyone who knows my family knows that we are proud Trojans. There wasn't really any question where I was headed after Portage, and I managed to get grades that were *just* good enough to qualify me on a rowing scholarship. Well, that and the social.

You see, I'm what people call an "influencer." It started when my family began making YouTube videos on a lark, filming our trick shots with frisbees and ping pong balls and whatever. People loved it, and somehow our water bottle flip video back in 2016 got over fifty *million* views. By 2017, we had t-shirts, merch, the whole thing. I went to junior prom in an actual Lamborghini the local dealership let me use in exchange for exposure in the video. Anyway, as I was getting closer to graduation, I knew my grades were marginal for SSU, and although I was good at rowing, I wasn't, like, an Olympic hopeful or whatever. So we started making sure that we wore our SSU gear in the videos, and we tagged SSU's Advancement office and stuff. When the *Kalamazoo Gazette* did an interview with us, I laid it on real thick about how the only school I wanted to go to was SSU. Pretty soon, they figured out that we were driving *traffic*, and their interest went way up. I did a whole Insta series for the rowing team, really next leveled their profile, and we even figured out ways to do a TikTok stunt with them. Did you know a college 8 pulls hard enough that you can waterski behind it?

So yeah, after Superior State landed Emily Regan *and* John Graves in one recruiting year, 2018, I got in. On a rowing scholarship, even if I don't see as much of the boats as I do of my iPhone 13 Pro Max. My videos are worth more wins than the coxswain, although now that you mention it, Kate Guregian *also* signed her letter of intent because of them.

I met Andromeda Johnson the first day of school, when we were assigned as dorm room neighbors. They were both single rooms, though, so we were always back and forth, once we became friends. Which took a few months! It wasn't a natural fit, at first. She seemed kind of quiet and shy, but I'm a really talkative people person and I was eventually able to make her feel comfortable. By winter break that first year, AJ really came out of her shell. Oh, yeah, she preferred "AJ" or, for her close friends, "Andi." Her parent Jay – who insists on being called "Jay" by Andi's friends, which – Spoiler Alert! – is totally weird – always called her "Andromeda," but you could super tell she didn't like that. I mean, Andi was totally different around Jay… quiet, always agreeing with things, almost like a little kid or something. When Jay would leave, you could totally see the weight lift, and we'd go back to playing Tool or Slipknot instead of that old crap. Our dorm was pretty lax about rules, so we were allowed to turn it up to 11. Playing Slipknot quiet is like eating soup at room temperature. Andi still went home like *way* more than I did, but mostly for laundry or free food or whatever. Which was cool, I guess. But considering Jay's vibe, also kinda weird.

Anyway, Andi and I both loved, like, arty stuff, and we got along great, so we roomed together by choice the next year at an off-campus apartment. Around then, Andi started to get really into social justice. I mean, she was always political, way more than

me, but she now was always up late on message boards and Twitter and Instagram. Her digital art was off the hook, so she got popular with student groups. She even made that t-shirt for the Skydiving Club you've probably seen around. You know, SSU Skydiving: Because MSU Doesn't Have the Guts, with that puny looking Spartan at the bottom looking up, like, all sad? That was killer.

Anyway, around that time Christoph, the Teaching Assistant in our Human Being and the Citizen seminar, got fired for smoking weed in his office on campus, and he lost his research funding and his scholarship or whatever, too. And we both thought that was really sketch, because recreational use is, like, legal now, and this is a state university and all. But talking to him, we learned that grad students had no protection at all and some were considering a union. Andi started getting involved – I think she was kind of crushing on this guy – and doing their artwork and their social and stuff.

That's also when we started getting music from campus bands. I mean, Slipknot is sweet, but they're so mainstream and really, they're so commercial now. Who wants to have the music everyone else knows, when you can see REM at the Georgia Theater? If Andi got super-excited about a song she was listening to, she would take out one of her AirPods and try to get me to listen. I'd make her turn it down, though; her 'Pods were always blasting at the maximum level, and it hurt my ears even with my own habits. I remember one time we were walking to the library and she actually got sideswiped by a biker because she couldn't hear him coming. She had both of her 'Pods in at the time. Thankfully, nobody was hurt, but she was hella embarrassed. I used it as an excuse to try and get her to wear only one 'Pod at a time. Truth is, I was tired of her noise cancelling making it harder for me to get her attention! I figured with one 'Pod at a time, she could

still be aware of what was going on around her – you know, as a safety measure. She reassured me that she was always aware of her surroundings and the biker incident was a fluke. Besides, she told me that she couldn't be a real rocker with only one 'Pod in.

By April 2021, the union thing was in full swing, and Andi was trying to figure out a way to make a really big splash. Jay kept pushing Andi to make it bigger and more impressive, like it wasn't enough to just get people, they had to make some kind of Statement or something. It was a lot, man. Andi was struggling, between the art projects she had to do and taking art history classes with the art history majors, which was a whole different level of competition for her. One night, she was totally stressing, and I was being a friend, just listening. The light in the room kept catching my cell phone, and I was playing with the reflection, joking around and flashing it in her eyes and stuff. And she stood up and was like "That's brilliant!" and I was like "I know," because that's what you say when that happens, and she ran out of the room, and I was like "Cool, I'm brilliant, and now I get to go to sleep." And I did.

I didn't think much of it until a couple days later, when I was Safety Driving for Cheddar. I'd taken a job there in early 2020. Lots of Superior State students do, since their offices are so close to campus and having a little money for pizza or beer is kinda nice. Not that I needed the extra cash, but working in a "real job" is super-relatable, which is important to maintaining an authentic brand. Cheddar actually recruited *me* to do social media, but I'm not, like, a sellout or whatever, so instead I asked to do the Emergency Driver thing. That let me meet all kinds of passengers and stuff, which gave me stories for the feed. Plus, I didn't have to *do* anything. It was win-win. I had a close call once,

where the Colt stopped just short of hitting someone in a cross-walk, but I never once had to take control in several hundred hours in the passenger seat.

I mean, it was a lot of responsibility and all. There was a whole week of training – I cut class – and testing and all that to make sure you get it. They even have a simulator where you have to be certified, and you re-test every six months. And, of course, you have to have a clean driving record. The idea is to have you there in case the computers stop working, but once you memorize the procedures – which are intentionally simple! – there's not much to it. The hardest part for me was staying off my phone, because my followers expect real-time interaction. But I managed.

That didn't stop Max Kamman from trying to get me to put Cheddar products on my stream. I guess MTG – that's Mikel – had heard that I had experience with branding, and Max was always trying to make MTG happy or, like, giving weird speeches about how lucky we were to have MTG. One time, Max even tried to get me to do some kind of internet biopic of MTG, calling Mikel "our founder and inspiration." Creepy-weird vibes. Honestly, the whole place was a little bizarre. Max was, like, the High Priest of MTG; MTG talked – and dressed! - like a Divinity School doctoral student; and then there was Chidi, who was super-intense about literally everything, always accusing everyone of stuff and complaining that only Chidi could be trusted to do anything. Chidi kept inserting themself into things that were none of Chidi's business, like whether safety drivers had their schoolwork with them or came in hung over or whatever. Max would, like, *talk* to you, maybe send you home for the day, but Chidi would try to get people *fired*. No wonder no one liked Chidi. But the weirdest thing of all was watching Jay there as an Emergency Driver, trying to be all "I love Cheddar" and wearing a "Hello, My Name is Terry" sticker

or something. I didn't tell Andi, because I didn't want to embarrass her, but it was *hella* embarrassing. A grown adult, acting like a freshman trying to con the liquor store clerk for a six pack.

Anyway… wait… what was I saying? Oh! Right! The MTG video thing. Yeah, no way I was doing that! The only videos I ever did from the Colt were the ones we did for the promotional Day in the Life at Cheddar campaign I created for Cheddar in January 2021, profiling different employees and jobs at Cheddar. And of course I starred in the Emergency Driver episode. But you want to know a secret? Even though I was pretending to do all the Emergency Driver stuff and we told the audience I was in the car alone, there was another dude in back as the *actual* Emergency Driver, so I could narrate things safely. The commands I was doing were the real ones, but all the actual controls were done from the back seat. That's how serious they were about safety. But honestly, during my real job? The challenge was not having too much work to do; it was fighting off the boredom!

Imagine my surprise on the 17th when we got on the road and just before noon, suddenly there were people carrying mirror-reflecty-things everywhere! I was riding in my Colt over from the Science Quad, between fares, southbound on Gilbert approaching the intersection with Riverview, with a police car riding my back bumper for some reason. It was a sunny and, like, 70, so there were people all over the sidewalks and sitting outside at the library café. Then I realized the reflect-things were for the event Andi had been planning! I was psyched for Andi; while a bunch of people were just enjoying the weather, quite a few of them had their own reflector things. It was so cool; reflected lights were bouncing all over the place, right there on the street, like a rave or something. I remember

thinking to myself that maybe Andi and I could treat ourselves to an iced coffee and sit out there and trip out after I got off shift. The sun kept going in and out of the clouds, but when it was out, it was *shining*. Andi had been worried about the weather, but I knew the protest would be okay with light like that! I just knew I had to get off work and get there, so I could shoot a quick video for my social media channel.

Our light was green, and traffic was moving. But it's a college town, and drivers know folks can cross anywhere, so, it's not unusual for the Colts to slow at intersections anyway. This one didn't, which I thought was a little odd, so I tapped a system query. Heck, there wasn't much else to do. I got no response, which is *super* weird, because it's usually instantaneous. So I put down my phone and tapped the query again while I reached for the wheel. At first, there was nothing, but then a couple beats later half the screen went red with warnings, warnings my training said I should have gotten automatically, without a query. And the audible system alarm should have gone off, too, but it didn't.

Then I looked up, and somehow, of all people, I saw Andi booking toward the intersection. She was wearing jeans, that "Enjoying Your Weekend? Thank a Union." t-shirt with the Rosie the Riveter design she had made, and – probably – had her AirPod Pros in. As usual, she appeared to be clueless of what was going on around her.

I slammed on the horn with one hand and initiated a takeover sequence with the other. My foot lunged for the emergency brake, but the Colt started braking right then by itself. Only it was too late. It hit her hard, going pretty fast. It was awful. I got slammed forward, and then I couldn't see anything. My phone flew forward and smashed against the dashboard, shattering the screen, which went black and never worked again. I went

nearly a week only able to use my desktop for social until Cheddar replaced it as property damaged while I was on the job. A week, with no phone! Anyway, I shook my head to clear the cobwebs and saw there was blood on the hood and the windshield. The Colt was in Park, disengaged, and there was a cop there, thank God. And then my heart shattered, because Jay was running over. I don't know why Jay thought it was cool to be at a college student protest about a grad student union, but that was kind of Jay, really. The cop and Jay kind of got into it for a minute, but then I told the cop that Jay was Andi's parent and he let Jay through. I grabbed Jay to pull Jay away from the scene, saying I was sorry that Andi had been hurt, but Jay needed to let the police and EMTs help. I had taken some first aid classes in Scouts, and Cheddar gave us a basic workplace safety course, so I knew that moving people who had been injured in collisions was a bad idea.

Look, I've replayed it in my mind a thousand times, and the worst part is that at one point, I thought Andi was going to turn around because I honked. After she darted into the street, she started back again, almost to being back at the curb. But instead, I think now she was turning so that she could pick something up that she'd dropped or hold onto a reflector in the breeze or whatever. Anyway, best I can remember it, she might have taken another step or two into the road when the AV hit her. It all happened so fast, and it's not like there's a video or something.

The way Andi darted out into the middle of the road, I really don't think the AV is to blame. It could have slowed sooner, but there was no real reason to: we had the right of way. Andi was in her own world, rocking out and trying to control the reflectors. From the time she entered the crosswalk to the time she actually got hit couldn't have been

more than a couple seconds. Her zig zagging threw me off; I didn't know what she was going to do, and I'm still not sure.

Look, I loved Andi, but her death was not the AV's fault. That cop was following real close behind the Colt, and if we had stopped short, there would have been a pile-up *for sure*. How would the AV, or any other human driver know that Andi might come into the street? I want the world to be different. I do. I want Andi to have had those 'Pods out that day and to have been paying attention and to be alive, sitting on the sofa with me, cranking Gravity on those stupid white brain-melters.

But that's not how things went down. Going hard at Cheddar ain't going to change that. Cheddar's not perfect, but it's deece. They were good to me after the accident, got me counseling and all that to help me not feel like this was my fault, replaced the phone destroyed in the crash. And everyone knows how important they are in the community. They provide a lot of opportunity for local college students, and they pay for grad school for their employees. Who does that? You can't close down Cheddar AV over a single bad outcome. How many families would that put out of their homes? I stand by Cheddar, and I'm proud to have them on my resume as a former employer. Micki even gave me some contacts I could pursue for future opportunities in communications when I left. I've said it on social, during the Better Tomorrow campaign I crafted, and I'll say it here, under oath or whatever—Cheddar is not to blame.

STATEMENT OF MAX C. KAMMAN

My name is Max Kamman, and I'm delighted to have the opportunity to rebut the spurious claims leveled against Cheddar Autonomous Vehicles and our CEO and visionary leader, Micki Thurston-Griffith.

First, a little about how I got here. I got my Bachelor of Science in engineering at Clemson University in 1991, and I got my Master's and Ph.D. in Control Systems Engineering from the University of Michigan in 1996. While I was in graduate school, I interned with General Motors (GM), which was the world's largest automaker for over 70 years. Initially, I focused more on electric vehicles than automated ones, but despite the climate crises, electric vehicles haven't caught on as they should.

When GM declared bankruptcy in 2009, I got shifted to a project called Maven, a car-sharing service that would lease cars to gig economy employees who didn't own cars but needed to run errands for money. At the time, that was the closest I could get to my real dream: working on automated vehicles.

I got interested in AVs in middle school. I was bullied a lot, and I started taking a real dim view of people. People have emotions. They let you down. But machines? Build 'em right, and they're as reliable as the sunrise. According to the National Highway Transportation Security Administration (NHTSA), drivers cause 94% of collisions. Drunk drivers cause over 10,000 deaths a year in the U.S. That's 28 people every day! Another 3000 people die every year from distracted drivers, another 800 from exhausted drivers. But machines don't text while driving, or drink and drive, and they go all night without losing a bit of their focus. Even at 13 years old, I knew the world needed self-driving cars.

Working on Maven helped get me where I wanted to be. From 2012-2016, I served as the Vice President of the Self-Driving Test Vehicles department of GM. I oversaw Systems Diversity and Redundancy, which includes the on-board computer, signal communicators, steering and breaking, perception sensors, and collision detection systems. But GM was bureaucratized and stultified. I wanted to work somewhere innovative. I wanted to work at Cheddar. Sure, there was a budget, and yes, it was iron-clad. But Micki was a brilliant thinker, totally outside the box and working all the time not just to improve the widget but to reconceive whether the widget was even the right thing or whether it could be replaced with something completely different.

Before I get into the details of my work with Cheddar Autonomous Vehicles and my review of the unfortunate situation resulting in Andromeda Johnson's death, let's face some basic facts. Really, we would all be safer if we did not put automobiles at the center of our society. I know that sounds weird coming from someone who's spent their entire life in the automobile industry, but it's true. Cars used to be just one option. Heck, when pedestrian collisions hurt the automotive industry in the early 1920s, cars actually got a reputation as deadly toys for the rich. But after WWII, the military industrial complex and the automotive industry drove passage of the 1956 Interstate Highway Act, which began the shift from trains to cars and trucks. Cars became the basic way to get around. Fast forward 75 years, and you've got our current situation. Human drivers are still exceptionally dangerous, but roads have gotten far more crowded, cars have gotten faster, and people have unlimited distractions in the car. Is it any wonder more people now die in crashes than from HIV/AIDS?

The increased danger has led to lots of improvements in auto safety: wearing a seatbelt, anti-lock brakes, air bags, etc. But these haven't made roads much safer, because of what's called "moral hazard;" because cars are safer, people don't feel as endangered operating them, so they engage in riskier behaviors… leading to collisions. But AVs don't suffer from moral hazard, just like they don't drink and drive, don't fall asleep, etc. They just act as programmed.

So how to make roads safer? Well, answer number 1: take humans out of the equation. Answer 2: make the AVs safer. And no one was more innovative or daring than Cheddar at making these possibilities into realities.

There are so many examples, but I'll just give two: AI and fail-safing. At GM, we used a rules-based system for coding. That's the same approach that's been used since, like ENIAC or something. It requires a human being to figure out every scenario that could occur, decide what to do with it, and determine how to render that into a software language the machine could interpret. Imagine if that was how you learned: you needed instruction in every single thing that could happen, and you could only do exactly what you had been told. Insane, right?

Instead, Micki and I hired some of the best coders in the Great Lake State. The first question was whether to have periodic AI learning, where you use AI to generate rules sets you periodically put in place or whether to have the AI learn as it went. I was leaning toward the former, but Micki insisted on the latter. I remember it clear as day. Micki pounded the table, looked me in the eye, and said, "I don't want some kid to die in the afternoon because our car didn't learn a lesson from the morning." Took my breath away. So inspiring. This inspiration trickled down to the rest of the employees also. One

was Rae Tucker, one of our safety drivers. I had hired Rae's hoping that Rae's social media background would highlight how exhilarating our work was. Rae certainly seemed to feel the shine of Micki's inspiration—Rae was always posting tons of positive content about Cheddar. I heard that some passengers complained on the internet that Rae was posting and making content while in the vehicles—which would have been unprofessional. Rae denied that, but I still gave Rae two warnings based on several internet comments each, before Rae left for other opportunities after being presented a final warning based on another.

Of course, not everyone experienced Micki's vision in the same way. Chidi Ransford, my senior colleague on the design team, tried to talk Micki out of using continuous updating AI, saying that the processing power wasn't there to prevent system confusion. And Chidi's not crazy; continuous updating AI does glitch more, and CU-AI sometimes can be slowed in deciding between two different lessons it has learned if it does not have a rules set to determine which to follow. But there's an easy solution: you give it a moment allow it to take in more data, essentially making the decision to continue as it was for another second or two while things develop. Human drivers do the same thing, when someone looks like they might want to move into your lane, for example. You don't slam the break or swerve right away, you wait a sec to see what's up. A total glitch, where the computer crashes or something, is almost impossible in a well-designed system. That's why it took us all of 2017 and 2018 to be road-ready; we made sure the system could not catastrophically fail.

That was even more important to me because of the second point that Micki made early in our time. One of the decisions almost all AV makers put into their vehicles is

what's called contingency braking: if something goes wrong, the AV starts to decelerate rapidly to avoid a bad outcome. But Micki wasn't stuck in a rut, and Micki put a finger on something that was bothering me, too: braking was the wrong decision a lot of the time. First off, we don't drive around expecting someone to radically brake all of a sudden. Many people tailgate, you know, following too closely? Back home in Boston, it's literally the only way people drive! So hard braking as a default would cause a whole category of rear-end collisions. Those collisions aren't usually fatal, because airbags, seatbelts, and other technologies are universal, but they can still cause tens of thousands of dollars in property damage and personal injuries.

But that's not all. The way physics works, you actually have more control when *accelerating* than you do *decelerating*. Your ability to turn to avoid cars in front of you is greater, for example. In humans, the difference is minimal, because decelerating gives you more time to react and the human brain can use that time to make better decisions. But in a computer-driven vehicle, the decision-making is faster, and so being at a steady speed and ready to accelerate is often the best choice.

Chidi didn't like that, either. Chidi wanted to prioritize preventing one severe collision over stopping *any* number of smaller ones, even without data to show how often the rear-end collisions would have been fatal or would have caused serious injury. Chidi's like that: emotional. Rational minds wait for the data.

Look: design issues between colleagues are fine, early on. But eventually decisions have to be made, and executives have to make them. Every effective team has to follow the leader eventually. Chidi was like a dog with a bone; just couldn't let it go, meeting after meeting. The truth is Micki and Chidi both proposed reasonable options.

My conclusion as a control systems expert with twenty years' experience is that Micki was right. Chidi disagrees. Whatever. At the end of the day, Micki's the boss, and the one paying the piper calls the tune. Calling Mikel out again and again, raising the issue every couple months? It suggests a lack of discipline that no company can sustain over time. Right or wrong, never be in doubt.

Which is why it's so upsetting that Cheddar is being blamed for this death, which we did *not* cause. Did we make design choices? Of course. Are they all choices I would have made? Probably not. Chidi wanted LiDAR in every car. I wasn't sure that was needed, but I thought it was worth incorporating LiDAR in some of the test vehicles, for example, to see if that would make them safer or if Tesla's right and you don't need it. But LiDAR is very expensive, and executives have to make choices. If Mikel had to choose between buying three or four LiDAR sets and hiring another two engineers for a year? Or between LiDAR and the testing program? Or between LiDAR and the bonuses needed to retain top engineering talent at the executive level? Those are real choices, and any one of those choices might make the Colt safer than the LiDAR would.

Plus, we were already running into the edge of our processing chips' ability. We solved the problem initially by moving to parallel processing, but that had its own issues. And when the next-gen cameras were installed, sometimes we even went above redline on the main Central Processing Units. Don't worry, though. All engineers build a safety margin into products. We were never more than 3-5% above nominal 100%. Sure, upgrading the processors would have been lovely, but buying bleeding edge processors to handle an input stream from LiDAR on top of the optical feed from the cameras? That might have meant even more significant layoffs, even more cuts to engineering and

testing, and so forth. Who knows if the project would even have survived? We had to work within the means we had, just like any other business. I accepted that, and there is no clear consensus in the field that LiDAR is necessary to run AVs reasonably.

Chidi, of course, continued to harp on that decision, too.

Innovation is hard, but not innovating is worse. Some people are cut out for that, others are not. That's why I was promoted to the head of the design team over Chidi, and that's also why Chidi eventually got fired. It was awful what happened to that Johnson girl, and no one wants to see the effects of progress up close and personal like that, but if you can't get over it to do a reasonable after-action review, if you can't live with the fact that your work has consequences, you don't belong in business. If Henry Ford gave up the first time a Model T crashed, the world would be a poorer place. No system is perfect.

On April 18, 2021, the day after the accident, Mikel Griffith appointed me as the liaison to the investigation team. My instructions were simple: "Get the answer that's right." I thought Mikel might have muttered "… for Cheddar," but I can't be sure, and anyway, obviously, all that anyone wanted was the truth, so it didn't matter.

What we found made us feel better. The car was well-maintained, even after we cut the maintenance team in half in late 2020. There was a loose wire and a dirty lens, but everything was in tolerance. Nothing that should have affected the Colt's operation.

Likewise, the computer was fully operational. It had spiked above redline during the moments before the collision, but that's also not surprising. During a unique incident in the AI's "lifetime," we would expect it to be working hard. And again, it never went more than 5% over maximum. There is only a very marginal difference between the

degradation of overall system performance at 90% of nominal maximum, where the Colt typically ran on a busy street, and 105% of nominal maximum.

And the vehicle did send a human assistance query to the safety driver, who it appeared was attempting to respond. So that redundancy was working, too.

So how do we explain what happened, then? The situations AVs struggle with are the same ones human drivers struggle with. What if a truck full of wood has an accident and all the wood spills out onto the road? If you can't brake in time, do you cross your fingers and run into some logs? Do you swerve even though there's a vehicle in the lane next to you? Sometimes, there are no good options.

The car was traveling forward at the speed limit, about to cross an intersection at a green light. At 12:03pm, there was a critical loss of camera function. The AI control system maintained course and speed while it attempted to regain sensor function, and it began processing scenarios to determine course of action in the interim. Not only could the same thing have happened to a human driver, if blinded by a flash or distracted by a ringing phone or text message or song choice or something, but a human driver could have reacted even more slowly, in a way that hurt or killed even more people.

Like that hypothetical human, moments before the regrettable collision, the Colt was traveling down a crowded road during a major event, doing its best to keep up with the cacophony of lights and sounds. Maybe Chidi's sensor algorithm punked out, but the decisional system was doing just fine even after we lost the front right quadrant video for a couple seconds. The AI handled the uncertainty in the right way: it sought additional information to address the conflict between its learned knowledge to slow down and its learned knowledge that slowing down causes collisions, too. While it was trying to decide

which situation this was, its collision warning activated, it incorporated that information into its calculations, and it decided to stop.

Some manufacturers make collision warning into an auto-stop situation, overriding all other programming. But that rule means that if there's a sensor malfunction, even a loose wire or a bump, the car stops unexpectedly and without any reason a human driver could expect. That's a recipe for rear-end collisions. And then, if the glitch turns out to be nothing, the vehicle accelerates to get back to road speed. Imagine you see a car slamming its brake and then its accelerator… in response to *nothing*. Is that a driver you'd want on the road with you?

We were smarter than that. By considering collision warning like any other input, our AI could tell the difference between an anomalous, transient sensor report and a real problem *before* slamming the brakes. That's why you hear about those collisions from some AV companies but not from Cheddar. On the 17th, our AI took the collision warning into account, along with all the other data from its cameras, its circumstances, its trajectory and rate of speed, and after a couple tenths of a second, it determined that this was now most analogous to its learned scenarios in which braking was appropriate. It then began braking, just as it needed to. That was the right decision, even if it couldn't stop in time because the pedestrian had darted into traffic against a green light.

It's not possible to avoid every accident. If you run in front of a car, you might get hit. I think the AV makes that *less* likely, not more. But Chidi tried to turn the collision review process into the Inquisition or something, to show how guilty we all are, how bad Cheddar was. Chidi even went behind the team's back, directly to the Board. Chidi was attempting to blame our leader, and me. People were upset enough without rehashing

every design decision we ever made while wearing a hair shirt every day. Chidi likes to pretend to be some kind of martyr or whistleblower in a movie, but really? Chidi was a drag for four years, and people got tired of Chidi complaining about the realities of corporate life, like the mediocre cafeteria food and the constant demand for uncompensated overtime. Chidi was killing the team, and so I signed off on Chidi's termination. Insubordination is a morale-killer, and one bad apple spoils the basket.

And of course I was proven right when Chidi tried to hack the company! Look: I don't know what deal Chidi had with Mikel; I wasn't there. But there are right and wrong ways to do things, and Chidi picked the wrong way. Got a beef? Get a lawyer; this is America, it's not like they're an endangered species or something.

The Colt glitched briefly trying to make a hard decision, and the entire Colt has learned from that unfortunate combination of events. Colt processors now include a new subroutine that identifies pedestrian walkways and weighs more heavily the possibility that someone may step into one, even against a light. That's not something the AI did at the time of collision, because it is not something we saw very often in 2020-21. Of course, that time was peak COVID, so there were a lot fewer people out, but even so. You can only think of so much. I feel terrible for Andromeda and her family, but every technological leap has a small number of hiccups. That should not stop us

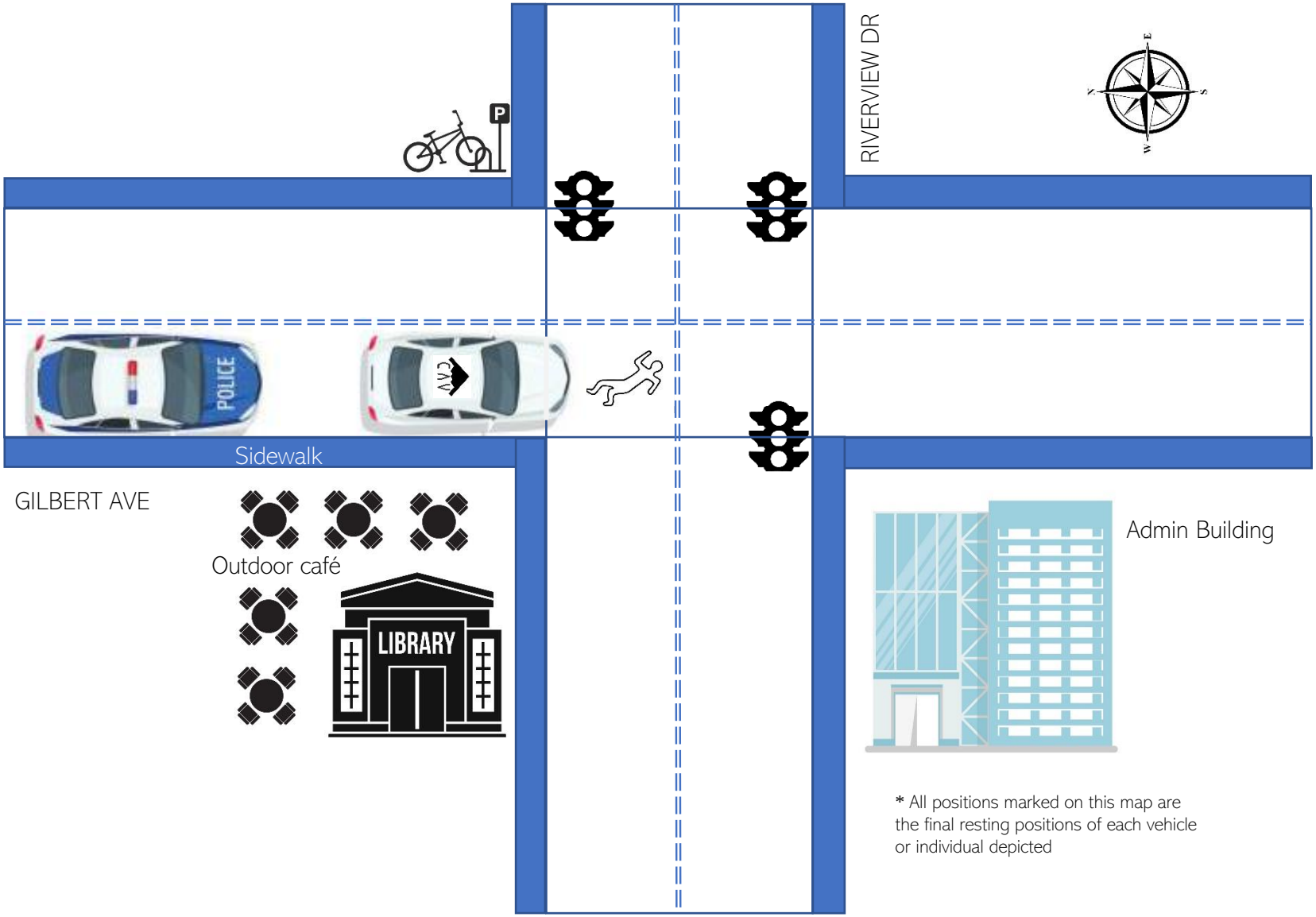
from doing the greatest good for the greatest number.

EXHIBIT LIST

1. Diagram/Map of Accident Scene
2. Picture of Cheddar AV Taxi
3. Summary/Table of Levels of Driving Automation for On-Road Vehicles
4. Emails between Mikel Thurston-Griffith and Chidi Ransford
5. Police Collision Report
6. Vehicle Safety Inspection Report – In Person
7. Vehicle Safety Lessons Learned Conclusion – Executive Summary
8. Email from Chidi Ransford to Cheddar Board
9. Jeter CV
10. Kamman CV
11. Letter from Derry Jeter to Mikel Thurston-Griffith
12. Letter from Jay Johnson

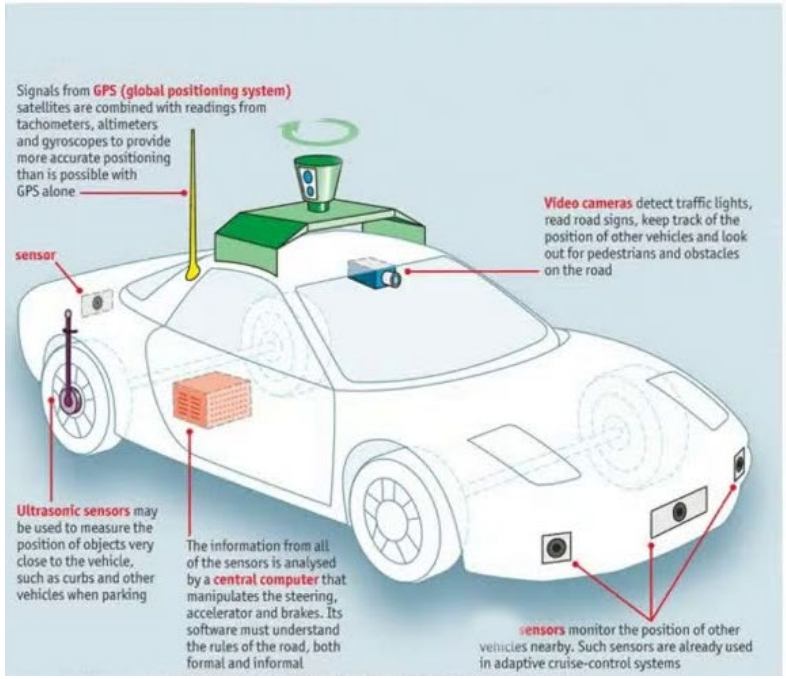
Exhibit 1

PRELIMINARY* ACCIDENT DIAGRAM



* All positions marked on this map are the final resting positions of each vehicle or individual depicted

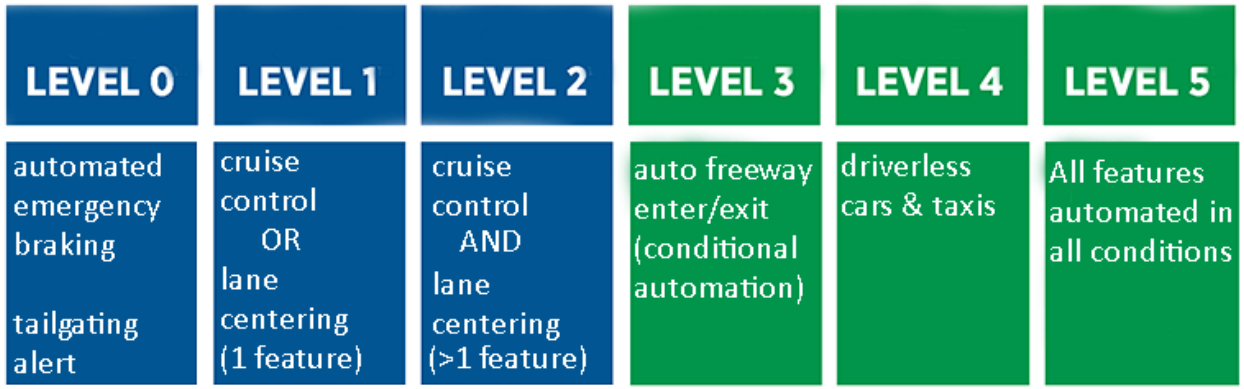
Exhibit 2



- Global Positioning System (GPS)
- Cameras (Video)
- Ultrasonic Sensors
- Central Computer
- Dedicated Short-Range Communications-Based Receiver (not pictured)

Exhibit 3

LEVELS OF DRIVING AUTOMATION



Human drivers must monitor the vehicle at all times and when using any Level 0, 1, or 2 features.

Humans do not drive unless alerted by safety notice.

Exhibit 4a

Date: Feb. 25, 2019 [07:22PM EST]
From: Ransford, Chidi (chidi_r@cav.net)
To: Thurston-Griffith, Mikel (micki_tg@cav.net)
Subject: LiDAR proposal for the next Colt

Dear Micki,

Thanks again for inviting me to the meeting in response to the recent fatal AV accidents out west. You're totally right; what matters most is safety.

I really think that adding LiDAR technology to the Colt for its next build is the best way to make our car as safe as possible. I've attached a full technical report that outlines how LiDAR hardware would integrate with our existing AI, CSP, and SIU operating systems. My enthusiasm for this cutting-edge (and safety-ensuring) technology made the report 14-pages long, but the TL;DR version is as follows:

- LiDAR (light detection and ranging) is the most promising technology to create a 3D map in real time
- LiDAR systems have been shown to be a reliable backup sensory modality if any cameras and/or detectors malfunction
- Both forms of LiDAR (Time of Flight and Frequency Modulated Continuous Wave) could be compatible on the Colt
- From a programming perspective, LiDAR could be integrated into our current AI, CSP, and SIU operating systems
- QI/QC and on-road testing requirements can follow our previous efforts with the first Cold model
- Incorporating LiDAR will help us differentiate the Colt from our competitors (especially Tesla)

I know that you and the Board are worried about costs and that cash flow right now is a problem, but I firmly believe that adding this technology is the best way to ensure the Colt is the best AV on the streets in 2030!

Please do not hesitate to ask me any follow up questions. I would value that chance to meet with you again to discuss any concerns.

Thanks again, and have a great day,

/s/

Exhibit 4b

Date: Mar. 4, 2019 [1:24PM EST]
From: Thurston-Griffith, Mikell (micki_tg@cav.net)
To: Ransford, Chidi (chidi_r@cav.net)
Subject: RE: LIDAR proposal for the next Colt

Dear Chidi,

Thank you for your detailed work. As I said multiple times in the meeting . . . right now I'm more interested in the costs of LIDAR. Could you please send me the cost estimate for your proposal I requested?

Also, I'm in receipt of your emails about the cafeteria food. I understand it's bland for some palettes, but it seems to work for most people.

MTG

CEO | Cheddar Autonomous Vehicles, Inc.
Senior Vice President, Member of Board of Trustees | Cheddar Motors, Inc.
"Cogito, ergo sum"
René Descartes, 1664

Exhibit 4c

Date: March 5, 2019 [03:14AM EST]
From: Ransford, Chidi (chidi_r@cav.net)
To: Thurston-Griffith, Mikell (micki_tg@cav.net)
Subject: RE:RE: LIDAR proposal for the next Colt

Dear Micki,

Projected costs for LiDAR are as follows:

-$75,000 for hardware and installation (per vehicle)
*Note: experts predict this cost to continue to fall – possibly to $50,000 by 2021

-2 full time control system engineers (one in the AI dept, and one with me)
*competitive salary is $125,000 plus benefits

Hope this is helpful, and please don't hesitate to let me know if you have any other questions.

Also, my issue with the food isn't the level of spice; the spices are literally expired. The cafeteria is buying them at end of life to keep costs down. That's what makes the food bland.

Take care,

/s/

Exhibit 4d

Date: Mar. 5, 2019 [11:49AM EST]
From: Thurston-Griffith, Mikell (micki_tg@cav.net)
To: Ransford, Chidi (chidi_r@cav.net)
Subject: RE:RE:RE: LIDAR proposal for the next Colt

Whoa. Those were not the numbers I was expecting.

MTG

CEO | Cheddar Autonomous Vehicles, Inc.
Senior Vice President, Member of Board of Trustees | Cheddar Motors, Inc.
"Cogito, ergo sum"
René Descartes, 1664

Exhibit 4e

Date: Mar. 9, 2019 [8:24PM EST]
From: Thurston-Griffith, Mikell (micki_tg@cav.net)
To: Ransford, Chidi (chidi_r@cav.net)
Subject: RE: LIDAR proposal for the next Colt

Dear Chidi,

As you probably know, the Board met today to discuss the pros and cons of adding LiDAR to the next build of the Colt. After careful consideration and weighing the potential benefits vs. the short- and long-term costs, we decided not to pursue LiDAR technology at this time.

While we all appreciate your enthusiasm and your dedication to the Colt program, as a program leader, we look to you to be a solution-oriented, positive influence on our overall objectives. You are past the point in your career where you should be proposing "solutions" that ignore our program budget and economic reality. What we need is proposals that leverage the synergies of our existing bleeding edge core competences. We might need an all-hands to kick the tires on your concerns, maybe we can drill down for some collective solutioneering. Let me test the waters on that and get back to you.

Thanks again for all your work on this, and hope all is well.

MTG

CEO | Cheddar Autonomous Vehicles, Inc.
Senior Vice President, Member of Board of Trustees | Cheddar Motors, Inc.
"Cogito, ergo sum"
René Descartes, 1664

Exhibit 5

MOTOR VEHICLE ACCIDENT REPORT

Please read the Privacy Act Statement on Page 3.

INSTRUCTIONS: Sections I thru IX are filled out by the vehicle operator. Section X, Items 72 thru 82c are filled out by the operator's supervisor. Sections XI thru XII are filled out by an accident investigator for bodily injury, fatality, and/or damage exceeding $500.

SECTION I - FEDERAL VEHICLE DATA

1. DRIVER'S NAME *(Last, first, middle)*	2. DRIVER'S LICENSE NO./STATE/LIMITATIONS	3. DATE OF ACCIDENT
CHEDDAR AUTONOMOUS VEHICLES, INC.	UM1998	4/17/21

4a. DEPARTMENT/FEDERAL AGENCY PERMANENT OFFICE ADDRESS	4b. WORK TELEPHONE NUMBER
2016 NORTH PITCHER STREET, Kalamazoo, MI	(269) 384-2131

5. TAG OR IDENTIFICATION NUMBER	6. EST. REPAIR COST	7. YEAR OF VEHICLE	8. MAKE	9. MODEL	10. SEAT BELTS USED
	$	2020	COLT		☐ YES ☐ NO

11. DESCRIBE VEHICLE DAMAGE
DAMAGE TO THE PASSENGER SIDE FENDER

SECTION II - OTHER VEHICLE DATA *(Use Section VII if additional space is needed.)*

12. DRIVER'S NAME *(Last, first, middle)*	13. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS
N/A	

14a. DRIVER'S WORK ADDRESS	14b. WORK TELEPHONE NUMBER

15a. DRIVER'S HOME ADDRESS	15b. HOME TELEPHONE NUMBER

16. DESCRIBE VEHICLE DAMAGE	17. ESTIMATED REPAIR COST
	$

18. YEAR OF VEHICLE	19. MAKE OF VEHICLE	20. MODEL OF VEHICLE	21. TAG NUMBER AND STATE

22a. DRIVER'S INSURANCE COMPANY NAME AND ADDRESS	22b. POLICY NUMBER
	22c. TELEPHONE NUMBER

23. VEHICLE IS	24a. OWNER'S NAME(S) *(Last, first, middle)*	24b. TELEPHONE NUMBER
☐ CO-OWNED ☐ RENTAL ☐ LEASED ☐ PRIVATELY OWNED		

25. OWNER'S ADDRESS(ES)

SECTION III - KILLED OR INJURED *(Use Section VIII if additional space is needed.)*

A

26. NAME *(Last, first, middle)*	27. SEX	28. DATE OF BIRTH
ANDROMEDA JOHNSON	F	2/20/00

29. ADDRESS
780 DRAKE ROAD

30. MARK "X" IN TWO APPROPRIATE BOXES	31. IN WHICH VEHICLE	32. LOCATION IN VEHICLE	33. FIRST AID GIVEN BY
☑ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☑ PEDESTRIAN	☐ FED ☐ OTHER (2)		OFC

34. TRANSPORTED BY	35. TRANSPORTED TO
EMS	BRONSON HOSPITAL EMERGENCY

B

36. NAME *(Last, first, middle)*	37. SEX	38. DATE OF BIRTH
N/A	F	

39. ADDRESS

40. MARK "X" IN TWO APPROPRIATE BOXES	41. IN WHICH VEHICLE	42. LOCATION IN VEHICLE	43. FIRST AID GIVEN BY
☐ KILLED ☐ DRIVER ☐ PASSENGER ☐ INJURED ☐ HELPER ☐ PEDESTRIAN	☐ FED ☐ OTHER (2)		

44. TRANSPORTED BY	45. TRANSPORTED TO

46. Pedestrian

a. NAME OF STREET OR HIGHWAY	b. DIRECTION OF PEDESTRIAN *(SW corner to NE corner, etc.)*	
	FROM	TO
RIVERVIEW DRIVE	WEST	EAST

c. DESCRIBE WHAT PEDESTRIAN WAS DOING AT TIME OF ACCIDENT (Crossing intersection with signal, against signal, diagonally; in roadway playing, walking, hitchhiking, etc.)
PEDESTRIAN WAS CROSSING THE INTERSECTION OF RIVERVIEW DRIVE AND GILBERT AVENUE.

SECTION IV - ACCIDENT TIME AND LOCATION *(Use Section VIII if additional space is needed.)*

47. DATE OF ACCIDENT	48. PLACE OF ACCIDENT *(Street address, city, state, ZIP Code; Nearest landmark; Distance nearest intersection; Kind of locality (industrial, business, residential, open country, etc.); Road description).*
4/17/21	INTERSECTION OF RIVERVIEW DRIVE AND GILBERT AVENUE NEXT TO THE ALMA POWELL LIBRARY ON SSU CAMPUS.
49. TIME OF ACCIDENT	
12:03 PM	

50. INDICATE ON THIS DIAGRAM HOW THE ACCIDENT HAPPENED

Use one of these outlines to sketch the scene. Write in street or highway names or numbers.

a. *Number Federal vehicle as 1, other vehicle as 2, additional vehicle as 3 and show direction of travel with arrow.*

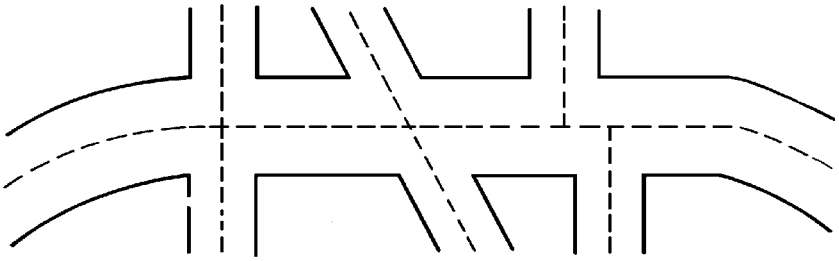
Example: 1 2

b. Use solid line to show path before accident and broken line after the accident — 2 2

c. Show pedestrian by

d. Show railroad by

e. Place arrow in this circle to indicate *NORTH*



*See Attached Diagram

51. POINT OF IMPACT *(Check one for each vehicle)*

FED	2	AREA
		a. FRONT
		b. R. FRONT
		c. L. FRONT
		d. REAR
		e. R. REAR
		f. L. REAR
		g. R. SIDE
		h. L. SIDE

52. DESCRIBE WHAT HAPPENED *(Refer to vehicles as "Fed", "2", "3", etc. Please include information on posted speed limit, approximate speed of the vehicles, road conditions, weather conditions, driver visibility, condition of accident vehicles, traffic controls (warning light, stop signal, etc.) condition of light (daylight, dusk, night, dawn, artificial light, etc.) and driver actions (making U-turn, passing, stopped in traffic, etc.).*

GILBERT AVENUE IS A TWO WAY STREET WITH ONE LANE IN EACH DIRECTION AND NO TURNING LANE IN THE MIDDLE. THERE ARE SHOULDERS ON BOTH SIDES OF THE ROAD -- ENOUGH FOR A BICYCLE, BUT NOT WIDE ENOUGH TO ACCOMMODATE ANY PARKING. THERE IS A CAFE RIGHT ALONG THE STREET IN FRONT OF THE LIBRARY WHERE STUDENTS AND THE GENERAL PUBLIC CAN SIT AT TABLES OUTSIDE.

AT THE TIME OF THE ACCIDENT, THE LIGHT WAS INITIALLY GREEN AND THE TRAFFIC APPEARED TO BE IN LINE WITH THE 35 MILE PER HOUR SPEED LIMIT. A CHEDDAR (AUTONOMOUS) TAXI WAS NEARING THE INTERSECTION TRAVELING SOUTH ON GILBERT AVENUE. THE DECEASED WAS ENTERING THE INTER-SECTION CROSSWALK GOING FROM WEST TO EAST. THE CHEDDAR TAXI DID NOT BRAKE BUT INSTEAD CONTINUED INTO THE INTERSECTION. THE LIGHT WAS YELLOW AS SOON AS THE CHEDDAR TAXI WAS UNDER THE INTERSECTION RIGHT AT THE TIME THAT THE CHEDDAR TAXI IMPACTED THE DECEASED.

THIS OFFICER WAS DRIVING DIRECTLY BEHIND THE CHEDDAR TAXI. (SEE BELOW FOR ADDITIONAL INFORMATION)

SECTION V - WITNESS/PASSENGER *(Witness must fill out SF 94, Statement of Witness) (Continue in Section VIII.)*

	53. NAME *(Last, first, middle)*	54. WORK TELEPHONE NUMBER	55. HOME TELEPHONE NUMBER
A	JAY JOHNSON (PARENT OF VICTIM)		(269) 558-2698
	56. BUSINESS ADDRESS	57. HOME ADDRESS	
		5010 GULL ROAD	
	58. NAME *(Last, first, middle)*	59. WORK TELEPHONE NUMBER	60. HOME TELEPHONE NUMBER
B	RAE TUCKER (ROOMMATE OF VICTIM)		(269) 789-4128
	61. BUSINESS ADDRESS	62. HOME ADDRESS	
		780 DRAKE ROAD	

SECTION VI - PROPERTY DAMAGE *(Use Section VIII if additional space is needed.)*

63a. NAME OF OWNER	63b. OFFICE TELEPHONE NUMBER	63c. HOME TELEPHONE NUMBER
63d. BUSINESS ADDRESS	63e. HOME ADDRESS	
64a. NAME OF INSURANCE COMPANY	64b. TELEPHONE NUMBER	64c. POLICY NUMBER

65. ITEM DAMAGED	66. LOCATION OF DAMAGED ITEM	67. ESTIMATED COST
		$

SECTION VII - POLICE INFORMATION

68a. NAME OF POLICE OFFICER	68b. BADGE NUMBER	68c. TELEPHONE NUMBER
M. LAGER	7514	

69. PRECINCT OR HEADQUARTERS	70a. PERSON CHARGED WITH ACCIDENT	70b. VIOLATION(S)
KALAMAZOO DEPARTMENT OF PUBLIC SAFETY	CHEDDAR AUTONOMOUS VEHICLES	FAILURE TO STOP

SECTION VIII - EXTRA DETAILS

SPACE FOR DETAILED ANSWERS. INDICATE SECTION AND ITEM NUMBER FOR EACH ANSWER. IF MORE SPACE IS NEEDED, CONTINUE ITEMS ON PLAIN BOND PAPER.

VICTIM WAS WEARING SOME TYPE OF REFLECTIVE MATERIAL AND IT WAS UNCLEAR WHETHER VICTIM WAS ENTERING THE INTERESECTION AND/OR WHETHER VICTIM WAS WALKING OR RUNNING.

WHEN THE CHEDDAR TAXI IMPACTED VICTIM, SHE WAS KNOCKED INTO THE AIR AND LANDED HARD ON THE CONCRETE AT UNNATURAL ANGLES. THERE WAS INDICATION THAT HER HEAD IMPACTED THE CONCRETE CURB.

A MIDDLE- AGED INDIVIDUAL LATER IDENTIFIED AS THE PARENT OF THE VICTIM RAN TO THE VICTIM AND HAD TO BE RESTRAINED PRIOR TO LIFE SAVING MEASURES BEING ATTEMPTED ON THE VICTIM.

EMT ARRIVED AND COMMAND WAS RELINQUISHED TO THE MEDICAL PERSONNEL ON SCENE. THE CHEDDAR TAXI WAS ON THE OTHER SIDE OF THE INTERSECTION ON THE WEST SIDE OF THE ROAD. EMERGENCY BLINKERS WERE ACTIVATED. VICTIM WAS TRANSPORTED TO BRONSON EMERGENCY ROOM. VICTIM LATER EXPIRED FROM HER INJURIES.

SECTION IX - FEDERAL DRIVER CERTIFICATION

In compliance with the Privacy Act of 1974, solicitation of the information requested on this form is authorized by Title 40 U.S.C. Section 491. Disclosure of the information by a Federal employee is mandatory as the first step in the Government's investigation of a motor vehicle accident. The principal purposes for using this information is to provide necessary data for legal counsel in legal actions resulting from the accident and to provide accident information/statistics in analyzing accident causes and developing methods of reducing accidents. Routine use of information may be by Federal, State or local governments, or agencies, when relevant to civil, criminal, or regulatory investigations or prosecutions. An employee of a Federal agency who fails to report accurately a motor vehicle accident involving a Federal vehicle or who refuses to cooperate in the investigation of an accident may be subject to administrative sanctions.

I certify that the information on this form *(Sections I thru VIII)* is correct to the best of my knowledge and belief.

71a. NAME AND TITLE	71b, SIGNATURE AND DATE
OFFICER MATTHEW LAGER	*Matthew Lager* 4/18/2021

Exhibit 6

WEEKLY VEHICLE INSPECTION & MAINTENANCE LOG

VEHICLE HISTORY RECORD	
REPORT NUMBER	FLEET UNIT NUMBER
41875	K1996C
DATE	April 12, 2021

MOTOR CARRIER OPERATOR Cheddar Autonomous Vehicles, Inc.	INSPECTOR'S NAME (PRINT OR TYPE) ALLEN HAWKINS
ADDRESS 2016 North Pitcher Street	THIS INSPECTOR MEETS THE QUALIFICATION REQUIREMENTS IN SECTION 396.19. ☒ YES
CITY, STATE, ZIP CODE Kalamazoo MI 49007	VEHICLE IDENTIFICATION (✓) AND COMPLETE ☐ LIC. PLATE NO. ☐ VIN ☐ OTHER UM1998
VEHICLE TYPE ☐ 2-ppl cab ☒ 4-ppl cab ☐ van cab ☐ (OTHER)	INSPECTION AGENCY/LOCATION (OPTIONAL)

VEHICLE HARDWARE COMPONENTS INSPECTED

OK	NEEDS REPAIR	REPAIRED DATE	ITEM
			1. BRAKE SYSTEM
x			a. Service Brakes
x			b. Parking Brake System
x			c. Brake Drums or Rotors
x			d. Brake Hose
x			e. Brake Tubing
x			f. Low Pressure Warning Device
x			g. Tractor Protection Valve
x			h. Air Compressor
x			i. Electric Brakes
x			j. Hydraulic Brakes
x			k. Vacuum Systems
			2. COUPLING DEVICES
x			a. Fifth Wheels
x			b. Pintle Hooks
x			c. Drawbar/Towbar Eye
x			d. Drawbar/Towbar Tongue
x			e. Safety Devices
x			f. Saddle-Mounts
			3. EXHAUST SYSTEM
x			a. Any exhaust system determined to be leaking at a point forward of or directly below the driver/sleeper compartment.
x			b. A bus exhaust system leaking or discharging to the atmosphere in violation of standards (1), (2) or (3).
x			c. No part of the exhaust system of any motor vehicle shall be so located as would be likely to result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the motor vehicle.
x			**4. FUEL SYSTEM**
x			a. Visible leak
x			b. Fuel tank filler cap missing
x			c. Fuel tank securely attached
	x		**5. LIGHTING DEVICES** All lighting devices and reflectors required by Section 393 shall be operable.
x			**6. SAFE LOADING**
x			a. Part(s) of vehicle or condition of loading such that the spare tire or any part of the load or dunnage can fall onto the roadway.
x			b. Protection against shifting cargo
			7. STEERING MECHANISM
x			a. Steering Wheel Free Play
x			b. Steering Column
x			c. Front Axle Beam and All Steering Components Other Than Steering Column
x			d. Steering Gear Box
x			e. Pitman Arm
x			f. Power Steering
x			g. Ball and Socket Joints
x			h. Tie Rods and Drag Links
x			i. Nuts
x			j. Steering System
x			**8. SUSPENSION**
x			a. Any U-bolt(s), spring hanger(s), or other axle positioning part(s) cracked, broken, loose or missing resulting in shifting of an axle from its normal position.
x			b. Spring Assembly
x			c. Torque, Radius or Tracking Components.
x			**9. FRAME**
x			a. Frame Members
x			b. Tire and Wheel Clearance
x			c. Adjustable Axle Assemblies (Sliding Subframes)
x			**10. TIRES**
x			a. Tires on any steering axle of a power unit.
x			b. All other tires.
x			**11. WHEELS AND RIMS**
x			a. Lock or Side Ring
x			b. Wheels and Rims
x			c. Fasteners
x			d. Welds
x			**12. WINDSHIELD GLAZING** Requirements and exceptions as stated pertaining to any crack, discoloration or vision reducing matter (reference 393.60 for exceptions)
x			**13. WINDSHIELD WIPERS** Any power unit that has an inoperative wiper, or missing or damaged parts that render it ineffective.
x			
			List any other condition which may prevent safe operation of this vehicle.

INSTRUCTIONS: MARK COLUMN ENTRIES TO VERIFY INSPECTION: X OK, X NEEDS REPAIR, NA IF ITEMS DO NOT APPLY, _____ REPAIRED DATE

CERTIFICATION: THIS VEHICLE HAS PASSED ALL THE INSPECTION ITEMS FOR THE ANNUAL VEHICLE INSPECTION REPORT IN ACCORDANCE WITH 49 CFR 396.

ORIGINAL

WEEKLY VEHICLE INSPECTION & MAINTENANCE LOG

VEHICLE HISTORY RECORD	
REPORT NUMBER	FLEET UNIT NUMBER
41875	K1996C
DATE April 12, 2021	

MOTOR CARRIER OPERATOR Cheddar Autonomous Vehicles, Inc.	INSPECTOR'S NAME (PRINT OR TYPE) ALLEN HAWKINS
ADDRESS 2016 North Pitcher Street	THIS INSPECTOR MEETS THE QUALIFICATION REQUIREMENTS IN SECTION 396.19. ☒ YES
CITY, STATE, ZIP CODE Kalamazoo MI 49007	VEHICLE IDENTIFICATION (✓) AND COMPLETE ☐ LIC. PLATE NO. ☐ VIN ☐ OTHER UM1998
VEHICLE TYPE ☐ 2-ppl cab ☒ 4-ppl cab ☐ van cab ☐ (OTHER)	INSPECTION AGENCY/LOCATION (OPTIONAL)

VEHICLE SOFTWARE & AV COMPONENTS INSPECTED

OK	NEEDS REPAIR	REPAIRED DATE	ITEM
			1. CAMERA SYSTEM
	x		a. Computer relay
x			b. Roof camera
x			c. Forward camera
x			d. Back-facing camera
	x		e. Driver side camera
x			f. Passenger side camera
x			g. Recording system
			2. LIDAR SYSTEM
n/a			a. Computer relay
			b. Roof cam LIDAR
			c. Forward cam LIDAR
			d. Back-facing cam LIDAR
			e. Driver side LIDAR
			f. Passenger side LIDAR
			3. SENSOR SYSTEM
			a. Computer relay
			b. Front bumper sensors
			c. Back bumper sensors
			d. Driver side sensors
			e. Passenger side sensors

OK	NEEDS REPAIR	REPAIRED DATE	ITEM
			4. PROCESSORS
x			a. Image signal processor
x			b. Video processing unit
x			c. Vision accelerator
x			d. Deep learning accelerator
x			e. CUDA GPU
	n/a		f. CPU
			5. DRIVER ALERT
			a. Drive AR System
x			b. Drive IX System
x		n/a	c. Remote alert
			d. Remote override
			6. SYSTEMS
			a. Vehicle track
x			b. Road mapping
x			c. GPS integration
			d. Automatic Emergency Braking (AEB)
			7. CYBERSECURITY
x			a. Intrusion detection
x			b. V2V reference parser
x			c. V2V message parser
x			d. Firmware updates
x			e. OTA supply chain
x			f. OS security updates
			g. Certification Validation System (CVS)

OK	NEEDS REPAIR	REPAIRED DATE	ITEM
			List any other cosmetic or other issues with vehicle that do not affect safety of operation:
			Hood needs cleaning
			Carpet outside processor cabinet
			has melted, should be replaced

INSTRUCTIONS: MARK COLUMN ENTRIES TO VERIFY INSPECTION: X OK, X NEEDS REPAIR, NA IF ITEMS DO NOT APPLY, _____ REPAIRED DATE

CERTIFICATION: THIS VEHICLE HAS PASSED ALL THE INSPECTION ITEMS FOR THE ANNUAL VEHICLE INSPECTION REPORT IN ACCORDANCE WITH 49 CFR 396.

ORIGINAL

Exhibit 7

Cheddar Motors Board of Directors Safety Review Committee
Incident Report: April 17, 2021
Draft Presented: October 14, 2021
Approved by Board of Directors: October 27, 2021

Executive Summary

Introduction

The Cheddar Motors Review Committee has undertaken a comprehensive review of the accident that occurred on April 17, 2021, involving Andromeda Johnson and a Cheddar Autonomous Vehicles (CAV) Colt Vehicle System. On that day, due to factors beyond Cheddar Motors' control, a CAV Colt taxi made contact with Andromeda Johnson in an intersection, resulting in her death. This Committee – which is comprised of numerous experts in autonomous vehicles, programming, safety standards, and accident reconstruction – reviewed mechanical reports, maintenance logs, software systems, witness reports, and the black box retrieved from the vehicle involved.

CAV and the Colt System

CAV obtained a patent for its AV system and software in 2018. CAV's instantaneous success with Level 3 autonomy vehicles led to CAV filing for and receiving Level 4 and 5 approvals shortly thereafter. Fully autonomous (Level 5) vehicles hit the roadways in October 2020 under the model name "Colt." Several such vehicles operate as taxi units in the Kalamazoo, Michigan area, including Superior State University campus.

Colt vehicles feature custom control system software that allows for the integration of inputs from cameras and sensors. The control system software and sensor integration unit code was written by former CAV employee Chidi Ransford, who is currently awaiting trial for hacking into CAV's mainframe. Ransford's employment was terminated immediately, but the coding work was high-quality, which is why Ransford attempted to steal it. Current CAV engineer and executive Max Kamman wrote the AI processor code and testified before the Committee to Engineering's confidence in the system.

Each Colt is equipped with 12 integrated cameras and 16 ultrasonic proximity sensors. Years of testing has validated the suitability of this system; thus, CAV determined that LiDAR was unnecessary, redundant, and cost-prohibitive. Each CAV has a graphic processing unit (GPU) for core AI processing. The AI updates constantly, implementing what it learns virtually in real-time (a goal for other autonomous car manufacturers). Ransford complained that the updates caused glitching; however, no system is glitch-free, and it was CAV's opinion that installing LiDAR could make the glitching worse. Still, CAV immediately instituted a protocol to check and troubleshoot any glitches. There are no indications that the AI updates have ever caused a problem with an operating CAV.

In 2020, CAV upgraded all Colts with new and improved cameras. Ransford complained about that upgrade too (Colts were either/both too advanced and not advanced enough, apparently), saying the processors couldn't handle the inputs from these more sensitive cameras and requested processor upgrades for every vehicle. These were inconsistent with the CAV budget.

2020 brought the pandemic, staffing cutbacks, the camera upgrades, and the public release of Colts. Cheddar found it unnecessary and potentially dangerous (not to mention cost-ineffective) to initiate processor upgrades at that time. It came up with a better solution: parallel processors. Instead of reinventing the wheel, CAV gave each car more processing power of the same type it already had.

Colt vehicles do not employ Contingency Braking. The experts at CAV determined that automatic and sudden deceleration in any confusing or unclear scenario is not the safest course of action. According to a 2017 National Highway Traffic Safety Administration report, one-third of all collisions are rear-end collisions, and given how distracted human drivers are these days, tailgating and rear-end accidents are only going to increase. CAV engineers determined that a system that defaults to slamming on the brakes is not the safest one to employ, a decision the wisdom of which is demonstrated by Tesla's "phantom braking" incidents, in which violent braking initiates without adequate cause.
From October, 2020 until April 17, 2021, everything ran smoothly with all Colts in the fleet, aside from approximately a dozen sporadic glitching incidents, one of which caused an emergency shutdown, requiring immediate human intervention to prevent a high-speed crash. Fortunately, none of these incidents resulted in any collisions.

April 17, 2021

The Committee has reviewed Black Box data, eyewitness accounts, police reports, employee testimony, and other expert assessments in order to reconstruct the April 17, 2021 accident and determined what happened, how, why, and whether the CAV malfunctioned.

Between approximately 12:01pm and 12:04pm, a Colt taxi was traveling south on Gilbert Avenue toward the Riverview Drive intersection. At approximately 12:04pm, pedestrian Andromeda Johnson ran through a red light at the intersection and was struck by the Colt.

April 17th was clear, sunny, and approximately 68 degrees Fahrenheit. Along Gilbert Avenue and Riverview Drive, including on the sidewalk and lawn around the Alma Powell Library, a college protest was taking place targeting the General Administration building. Dozens of students stood or sat on the ground, many of them holding reflective devices. Many were yelling, chanting, or laughing. The Colt taxi was handling everything perfectly.

Then, for approximately 3 seconds, the front passenger-side camera feed apparently optically overloaded, blinding for cameras accounting for approximately 1/5 of the total area normally covered by the vehicle's optical sensors, with the outage localized to the front passenger side. Other cameras remained fully operational, functioning normally. During this time, the system briefly spiked over nominal maximum of processing capacity but stayed within 5% of nominal maximum (i.e., within engineering tolerances). The AI responded exactly as programmed by gathering additional information from the functional cameras and by rebooting its sensors—a process that takes roughly 2 seconds.

The safety driver performed admirably. The system data reflects that the driver inputted a system function query, perhaps in response to some concern, and had begun another when the system sent its human driver takeover request. The system does not record any response to the initial function query before the second query was started, approximately 1.5 seconds after the initial function query. That is outside normal performance for a system function query (which is .3 second, +/- .1 second) and could suggest in some notional sense that the AI may have experienced a brief, temporary systems conflict in processing inputs due to the unprecedented stream of junk data from its cameras. Black box and other archived data do not include complete processor logs, so one cannot be absolutely certain. At approximately the time the initial system query was returned, the ultrasonic collision warning activated, triggering a safety driver alert less than 1.5 seconds before impact, an insufficient time for the safety driver to take control. However, the vehicle began automatic braking not long thereafter. Braking could not occur in time to prevent the collision. Impact occurred at 12:03:52.

The question that most concerns Cheddar is why the front passenger-side camera lost its feed. As this Committee strove to answer that question, CAV pulled all Colt vehicles off the street for a period of 96 hours. CAV never takes chances with safety. The Committee has identified a few possible causes of the collision. The first is that a cable attaching the camera to the processor came loose. Because of the damage to the car and to the front right camera, investigators cannot determine if all cables were attached at the time of the accident. The CAV maintenance team checks all these cables regularly; however, sometimes they come loose. And had that happened on April 17, 2021--which the Committee very much doubts—it would not be the fault of CAV.

Another possibility is that the software misinterpreted or simply failed to interpret the input coming from the cameras at the front passenger side of the car simultaneously. Previous issues with reflected light from buildings had blinded one camera or perhaps two in one instance, and the AI was prepared for a limited loss of signal due to transient flash/flare incidents. But the AI may have glitched if confronted with a new scenario with a materially greater number of cameras blinded at or about the same time. It is impossible to

identify AI glitches in Black Box records. However, the Committee is confident that if such a glitch occurred, it was caused by highly unusual—and dangerous—external input.

Specifically, while it cannot say with 100% certainty what caused the front right cameras to malfunction, the Committee believes it's likely that the reflectors Ms. Johnson was carrying—one of which she stopped in the middle of the road to pick up—reflected sunlight into the camera's lens, rendering it unable to capture accurate images. The blinding glare could have triggered a systems conflict, particularly if other reflectors in the crowd hit other camera devices at the same time. Even though Ms. Johnson ran through a red light, the Committee believes that alone did not cause the accident. Colt taxis are equipped to navigate busy streets, and all of CAV's programmers and engineers know how common jaywalking is.

After a thorough investigation, it is the finding of the Committee that all key safety measures were in place and functioned properly in the vehicle in question on April 17, 2021. The Colt taxi queried its own data system for additional input to help it decide how to act. As it was processing this question and considering the safety driver's initial function query, the ultrasonic sensors signaled for the car to start braking. Upon consideration of this input, the AI decided braking was the appropriate course of action, and so it began to brake.

Thus, it is the opinion of this Committee that the system functioned as designed on April 17, 2021, and did what it was supposed to do.

Conclusion

Given the Committee's finding that the Colt taxi functioned properly on April 17, 2021, the Committee does not recommend issuing recalls or engaging in physical redesign of the vehicles or AV systems. However, CAV did not simply return all the Colts to the roads at the conclusion of this investigation. CAV integrated information gleaned from the investigation into the events of April 17, 2021 to further minimize the risk of recurrence. Each vehicle has new and improved datasets containing more possible road scenarios and related decision trees. Among other things, CAV's programmers have designed and implemented a system that specifically looks for pedestrian crossings, as well as for movement in the crossings, even against a light. The Committee is confident that in the future, Colt taxis will be able to prevent even tragic and unexpected accidents, such the one that caused the death of Andromeda Johnson.

/s/ Richard Santoni, P.E.
Committee Chair

Exhibit 8

Date: May 12, 2021 [3:21 am]
From: Ransford, Chidi (chidi_s@cav.net)
To: #CMBoD
Subject: Concerns -CONFIDENTIAL-

Dear Honorable Board Members:

I apologize for communicating this sensitive information directly to you in this fashion. I am fully aware of proper executive protocol and as you probably know I pride myself on being transparent, straight-forward and never compromising my integrity.

It is in that same spirit that I have decided this communication must come directly to you, the people charged with ensuring proper governance of this organization as I understand that you have a highest duty of inquiry with respect to the well-being and proper functioning of our company.

The nature of my concerns are specifically with the manner in which the inquiry into the unfortunate death of Andromeda Johnson and the Safety Review Committee is being conducted by Micki Thurston-Griffith. I know you already have spoken with me about my thoughts on the incident and my concerns as to how this tragedy was bound to happen when we decided not to invest in LiDAR technology, as I advised Micki and this organization some time ago, and to rely on unreliable parallel processing systems designed by our supposed chief designer – but actually chief lapdog – M.C. Kamman. With investigators like these, we will never get to the truth. I know that telling the truth about a Thurston-Griffith in this setting is risky, but I trust that you will see past the name to the feckless and duplicitous individual who carries it.

My concerns now revolve around the farcical nature of this Safety Review Committee and how Micki is simply leading the committee down a path that will exonerate our company and provide cover for our actions in not heading my warnings back in October of 2020. Truth will only come from a truly independent analysis, carried out by seasoned professionals. We have been cutting corners on this project for too long as M.C. struggled to stay within an organizational budget based more on hope than reality, and this investigation is simply more of the same. We need to know if there is blood on our hands. We need to know if M.C. is a murderer, a blood merchant trading human life for a better bottom line.

I implore you to resist the urge to only listen to what you hope to hear as opposed to the truth. We owe transparency to ourselves and to the community where our vehicles are driven. The public must be able to trust that we will do what is reasonable with respect to how we develop AV technology.

I offer my own services and my own testimony in this effort. As you know, I was passed over by Mikel Thurston-Griffith in the promotion of M.C. Kamman to head designer on the Colt. I think

you will find that I have superior credentials and better judgment than M.C. Whether I was passed over due to discrimination or to favoritism for the company's leading "yes" person I leave to your judgment.

If M.C. is justifiably fired for cause and I am promoted, I will also serve as a check on the overwhelming authority of Mikel Thurston-Griffith over this project. As the Founding Fathers of this country recognized, a system of governance without checks and balances is a recipe for autocracy. I offer to be the Board's check and the safety-oriented balance to Mikel's visionary profit-seeking, whose single-minded pursuit of profit over safety has already taken a life.

In your humble service,

/s/ Chidi Ransford

Exhibit 9

Derry Jeter, Ph.D

Fulkerson Lane Blacksburg, VA 24060

EDUCATION

Virginia Technical University, M.A. Automotive Engineering, 1990, Ph.D., Mechanical Engineering, 1992
Francis Bilancio Award for Contributions to Undergraduate Automotive Education
Graduate Researcher, FIA Foundation, 1991-92

Rutgers University, B.A. Mechanical Engineering, summa cum laude, 1986
Renstrom Prize for Contributions to Extracurricular Life
Work-Study – Twenty Hours per week, Bridgeport Motor Speedway
Captain, Swimming Team, 1985-86

EXPERIENCE

Fighting for Road and Highway Safety, Director of State Programs, 2018-Present
Legislative Assistant, Vice Chair for State Programs, 2015-18

Next Generation Safety, LLC, Owner and CEO, 2007-Present
Provide full range of technical expertise to automotive and racing organizations worldwide

The Truth About Apollo, LLC, Founder, FOIA Chair, and Chief Spokesperson, 1995-Present
Advocates for release of the truth about NASA's staged moon landings in 1960s and 1970s

Governors Highway Safety Association, Sen. Dir. for Policy and Government Relations, 2012-15
Staffer, Policy and Government Relations, 2004-12

FIA Federation, Researcher, Automotive Competitive and Road Safety

PROFESSIONAL ASSOCIATIONS

American Society of Mechanical Engineers, Member, 1986-Present
Vice Chair, Automotive Section, 1997, 2002, 2015
Liggins Award for Contributions to Safety Engineering, 2017

American Society of Safety Professionals, Member, 2009-Present
Chair, New Engineer Certification Committee, 2019

PROFESSIONAL WORK

Testified in State Legislatures on dozens of occasions
Testified as expert in state and federal court eleven occasions (six plaintiff, five defense)
Expert Commentator/Interviewee, *Truth Behind the Moon Landing* (Science Channel 2019), *Conspiracy Theory: Did We Land on the Moon* (Fox 2001)

Exhibit 10

MAX C. KAMMAN, Ph.D.

96 Linda Start Way| Kalamazoo, MI 49002

EDUCATION

University of Michigan, M.S. Mechanical Engineering, 1994, Ph.D. Control Systems, 1996
SAE Graduate Fellowship
Yagi Prize for Best Dissertation in Control Systems, Mechanical, or Electrical Engineering
Part-Time Work Fellowship, Bendix Commercial Vehicle Systems, 1994-96

Clemson University, B.S., Engineering, 1991
All-America, Golf, 1990
Phi Beta Kappa

EXPERIENCE

Cheddar Autonomous Vehicles, 2016-Present
Promoted in 2018 to Lead Designer, Colt Autonomous Vehicle, where I manage all aspects of the first-in-class autonomous vehicle with continuously updating Artificial Intelligence. Communicate on all aspects of budgeting and vehicular engineering and manufacture with senior executive team at CAV, including visionary founder Mikel Thurston-Griffith. Prior to present position, served as Software Autonomous Systems Designer from 2017-18, with principal responsibility for design of software and hardware data integration and camera systems processing.

General Motors Corporation, 2004-2017
Engineering Director, Buick Cascada
Systems Engineer, Maven Automotive Inc., 2009-10
Design Engineer, 2004-2009

PROFESSIONAL ASSOCIATIONS

American Society of Mechanical Engineers, Member, 2000-Present
Chair, Automotive Section, 2017
Nuckolls Award for Advancement in Control Systems or Systems Integration, 2019

Society of Automotive Engineers International, 1994-Present
Chair, Control Systems Section, 2014

PROFESSIONAL ACCOMPLISHMENTS

Testimony, Michigan State Legislature, 2018, 2019, 2020, 2021

Continuous Artificial Intelligence: the Holy Grail Discovered in Kalamazoo, Motor Trend February 2019

Toward a Smoother Blend: Can Optical and Technical Sensor Input Be Effectively Processed in Parallel?, IEEE Transactions on Automatic Control, October 2009

Exhibit 11

Next Generation Safety, LLC
Fulkerson Ave.
Blacksburg, VA 24060

Cheddar Motors
ATTN: M. Griffith
510 W. Ransom St.
Kalamazoo MI 49007

October 17, 2019

Dear Micki:

It was great to see you again at the Auto Show. Thanks for expressing interest in the NextGen track as an external testing facility. As we discussed, using NextGen as a contractor can limit the expense to and liability of Cheddar for testing its Colt line of vehicles.

NextGen offers a range of services in our facility staffed by ASE mechanics and professionals (and undergraduate and graduate students, who reduce the cost to our contractual partners). We can test your vehicle in all the usual ways – crash testing, braking, stress testing of engineering components and systems – but we can do more. NextGen exists to move beyond these simplistic models and to put vehicles in real-world situations with other vehicles driven by trained stunt drivers and with pedestrians, both real and simulated, on streetscapes and highway analogues. We even have built a variety of weather simulations, so you can test things in the "real world" conditions without any risk to Cheddar.

If I may make a professional suggestion, I know that Cheddar is operating without LiDAR. That's a bold choice! Not many people have the guts or faith to go that route, and I applaud you for that. With that said, we both know that camera systems create optical data, and optical data takes more processing power, and that means that your famous continuous improving AI has a lot of work on its hands. Continuous AI is a real dream for all of us, but you want to be sure it's trained in every scenario it might face, so that you can keep that safety record of yours. If you only lab-test it or give it limited street testing, it could let you down or overwhelm the processors at a critical moment. None of us want that.

NextGen has the perfect way to train the Colt's brain: Homecoming. No, not the actual Tech homecoming – although you'd be welcome to watch the big game from the NextGen booth anytime – but a simulated homecoming. Being on the Tech campus, we can simulate unpredictable crowds of hundreds, rain, clouds, or shine, on "city streets" like those all over American colleges. I know you're partial to Michigan State, but Tech offers facilities no one can match. Your AI brain will be ready for anything after four months with us.

UP FOR US. AND AT VA. TECH?
ARE YOU KIDDING ME?!?

HASHTAG SPARTANS, AMIRITE?

Our pricing is as follows:

- Bench testing (per major element): $25,000 - $50,000
- Simulator Modeling (per major element): $50,000-$100,000
- Simulator Modeling (full vehicle): $250,000
- Live Modeling (full vehicle): $350,000 (or $500,000 with Simulator Modeling included)
- Extended Operation Testing and Training (full vehicle): $500,000-$1,000,000
- Homecoming Package (full vehicle testing and simulation, extended operations and testing, six scenario tests of manufacturer choice): $3,500,000

I was also glad to hear your thinking on rear-end collisions. Your passion for that subject is obvious, as is the sincerity of the reasons behind it. I've never thought about things that way, and although I'm still not sure about your decision on automatic braking, you've opened my eyes to the possibilities.

If you have questions or additional safety needs, don't hesitate to get in touch. I look forward to hearing from you soon.

Sincerely,

Derry Jeter

Oct. 17. 2019

October 17, 2019

Micki, this is Expensive, but.... could be worth it! What do you think?

3.5 MILLION!!!???

THAT'S NOT EXPENSIVE; IT'S HIGHWAY ROBBERY. WE COULD BUILD A DOZEN OR SO COLTS FROM SCRATCH FOR LESS AND WE ARE NOT ASKING FOR LESS AND WE ARE NOT ASKING CHEDDAR TO PAY TO CLEAN THIS

Exhibit 12

January 4, 2022

Representative Mark Sampson
Michigan House of Representatives
P.O. Box 30014
Lansing, Michigan 48909-7514

Dear Representative Sampson:

My name is Jay Johnson and I am a concerned citizen and one of your constituents here in Kalamazoo, Michigan. I voted for you in your last 3 elections and mistakenly placed my trust in you to follow your guiding light with respect to decisions you make for our future.

I write to you with a broken and down-trodden heart. I know you heard how my daughter Andromeda Johnson's life force was stolen from her on April 17, 2021 when that horrendous Cheddar Taxi plowed into her as she was attempting to cross the street up on SSU's campus.

I cannot understand how we allow those death traps to even be on our roads. You can imagine how disappointed I was when I learned that you of all people voted for the Autonomous Vehicle legislation that started out as House Bill 995 which made it through the Senate and was signed by Governor Synder in 2016. I feel like the person I have supported for the last 3 elections is literally the cause of my daughter's demise. How could you? And, since I voted for you, I can hardly live with myself.

But that's water under the bridge. A lot of other stuff, too. I am putting you and everyone else on notice that someone has to pay for what happened to my daughter. Someone has to suffer just like I'm suffering right now, and I plan to do everything in my power to be sure that companies like Cheddar will never make enough profit to operate those cars in my community again.

I know that I am making progress because the big Cheddar Boss came to my home just the other day and offered a trifling sum of money to silence me. I couldn't believe they thought such a small amount would be enough to pay for what they did. But I'm sure you probably know all about that, since that the last time I checked Cheddar Motors was one of the heavy donors to your PAC. Make no mistake about it, I will leave no stone unturned to hit EVERYONE responsible where it hurts them the most. Please heed the call. Don't stand in the doorway, don't block up the hall. Remember: he that gets hurt will be he who has stalled. The battle outside is raging, and we will shake your windows and rattle your walls if that's what it takes!

Until you end this corruption, sleep with one eye open,

/s/ J. Johnson