

2a. According to John Greenough, Business Insider Intelligence, 10 Million self-driving cars will be on the road by 2020. The driverless car and its ever increasing popularity is a computing innovation that will change the world. The intended purpose of the autonomous car is to provide a safer way to get from one place to another. In the computational artifact, I show the dangers of driving with gruesome statistics about car crashes. Statistics about the dangers of driving are given, while I vocally describe the function of the autonomous car and how it combats said dangers.

2b. I found an open source video of a traffic time lapse that was about 58s. I put the video into Adobe Premiere Pro and added Titles to the video. Titles allowed me to put text on the screen, and I did just that with statistics about car crashes as well as statistics about driverless cars. I then wrote a script pertaining to the video and discussing the intended purpose of autonomous cars. I then recorded myself discussing the intended purpose of the innovation and put the audio over the video. Lastly, I converted the file to .wmv for size reasons.

2c. Self driving cars have had a huge impact on society, economy, and culture and they will continue to do so as they become more popular and more available to the common citizen. One beneficial effect self driving cars may have on society is they would result in less car accidents. Self driving cars are much safer than human driven cars as there is no room for human error. Gary Shapiro CEO, Consumer Technology Assn. claims “each year, more than 30,000 Americans die and many more are injured in car accidents”...“driverless cars could eliminate 90% of these deaths and injuries.” One thing that driverless cars could harm is the culture behind cars in America. There is almost nothing as deep and as involved as the community invested in cars in America. No matter what, there will always be those people that simply have to have the freedom of driving and the open road. There’s always going to be that niche group of people that needs a gas guzzling car that goes really fast. American culture would take a huge hit if self driving cars became the norm, that is assuming that is even possible with not only this group of people, but the group of people that may not have enough money to buy self driving cars. With the thrill of independence and freedom being stripped away from driving, American car culture will no longer exist. Although they are safer, driverless cars will have a hard time expressing one’s freedom.

2d. Data is necessary for self driving cars to learn and become safer. According to Kate Conger and Darrell Etherington, the policy of the National Highway Traffic Safety Administration says that “Vehicles should record, at a minimum, all information relevant to the [crash] and the performance of the system, so the circumstances of the event can be reconstructed.” This data is to be shared with federal regulators as well as other manufacturers to ensure maximum safety. To say data is important to driverless cars is an understatement. Driverless cars don’t only take in their own input to learn, but they consume the data output produced by all the other driverless cars (including themselves) in the world as an active effort to make these cars as safe as possible, even if perfection can’t be guaranteed. With this large amount of data, any task should be able to

be accomplished. Since data is imperative, a car that is a computer may be vulnerable to nefarious attacks on data security. With a car that is essentially a computer, a breach in data security or data control could prove devastating for the owners of the car as well as the car itself. If a car doesn't have tight enough data security, it could result in havoc on the roads and many lives could be at risk as cars don't only have the ability to harm the people inside of them, but they also have the ability to do great harm to people in their vicinity.

2e.

Shapiro, Gary. "Imperfect Self Driving Cars Are Safer than Humans Are." *Wsj.com*. Wall Street Journal, 14 Aug. 2016. Web. 29 Sept. 2016.

<http://www.wsj.com/articles/imperfect-self-driving-cars-are-safer-than-humans-are-1471188659?ru=yahoo?mod=yahoo_itp&tsrc=apple>.

Greenough, John. "10 Million Self-driving Cars Will Be on the Road by 2020." *Business Insider*. Business Insider, Inc, 15 June 2016. Web. 29 Sept. 2016.

<<http://www.businessinsider.com/report-10-million-self-driving-cars-will-be-on-the-road-by-2020-2015-5-6>>.

Conger, Kate, and Darrell Etherington. "Federal Policy for Self-driving Cars Pushes Data sharing." *TechCrunch*. N.p., 20 Sept. 2016. Web. 29 Sept. 2016.

<<https://techcrunch.com/2016/09/20/federal-policy-for-self-driving-cars-pushes-data-sharing/>>.

Video

Nathan Miller. "Traffic." Online video clip. Archive.org, October 6, 2008. Web. 12 October 2016.

Statistics in video

"Road Crash Statistics." *Road Crash Statistics*. N.p., n.d. Web. 28 Oct. 2016.

<https://twitter.com/LiamT>. "Google's Self-driving Cars Involved in 11 Crashes | ZDNet." *ZDNet*. N.p., n.d. Web. 28 Oct. 2016.

Pictures in Video

Piotrg255. Crashed Car. Digital image. *Pixabay.com*. N.p., 20 Mar. 2015. Web. 12 Oct. 2016.

Ben_Kerckx. "Free Image on Pixabay - Accident, Car Accident, Car, Scrap." *Free Photo: Accident, Car Accident, Car, Scrap*. N.p., n.d. Web. 28 Oct. 2016.

Dfbailey. "Free Image on Pixabay - Car, Crash, White, Vehicle." *Free Photo: Car, Crash, White, Vehicle*. N.p., n.d. Web. 28 Oct. 2016.

@muthukumarceg. "Fancy Working on an Open-Source Project for Self-Driving Cars?" *Geoawesomeness*. N.p., 30 Sept. 2016. Web. 28 Oct. 2016.

"Self Driving Car on Map." *Locate*. Locate.world, n.d. Web. 28 Oct. 2016.