

2a. The represented innovation is self-driving cars. Self driving cars are cars that are equipped with sensors that allow it to drive and make decisions based on its surroundings with little to no human input (3). This invention serves many purposes, such as relieving humans from the burden of driving as well as creating faster, safer, and more efficient drives (1) (2). My artifact illustrates this purpose by showing an example of a self-driving car and including an example of some sensors used, showing how a computer can process data to perform a task better than a human.

2b. To create my artifact, I used Google Slides to make a baseline presentation. I looked up images from Google Images for my presentation. I made sure to only use images that I was allowed to by using Google Image's search filter to only select images that were labelled for reuse. I used Open Broadcasting Studio to record my presentation video. I then performed basic edits in Shotcut, an open source video editor.

2c. Self driving cars promise to give commuters more safe travels by removing the element of human error (1). While robots can make mistakes, they eventually promise to drive better than humans. Self driving cars also can navigate faster than humans, and promise faster, more efficient travels (2).

However, Self driving cars threaten people's freedom (1). In order to minimize crashes, some people call for human drivers to be removed from the roadways once the technology has become stable enough (1). As a society, we would effectively be trading our freedom for security, a reality many would consider a drawback.

2d. Self driving cars consume data from their surroundings using a wide variety of sensors (3). This gives the computer an idea of the users surroundings. I processes this data by constructing an internal map of the area surrounding the user as well as identifying obstacles (4). It then makes a decision based on the map and obstacles to get the driver to their destination (4). Self driving cars have many privacy concerns. One major concern is how manufacturers can get data from their cars and "see" where its user has gone. Self driving cars could also be hacked (1).

2e.

Data:

1. Marketing, Pollack P. "Self-Driving Cars: Pros And Cons To The Next Big Shift In Transportation." *The Pollack PR Marketing Group*, 13 Sept. 2018, www.ppmgcorp.com/in-the-red/self-driving-cars-pros-and-cons-to-the-next-big-shift-in-transportation.
2. Silver, David. "Self-Driving Cars Will Keep Getting Better Forever." *Forbes*, Forbes Magazine, 4 Sept. 2018, www.forbes.com/sites/davidsilver/2018/09/04/self-driving-cars-will-keep-getting-better-forever/#104e4c07217d.

3. Felix. "Sensor Set Design Patterns for Autonomous Vehicles." *Open Autonomous Driving*, 25 Jan. 2019, autonomous-driving.org/2019/01/25/positioning-sensors-for-autonomous-vehicles/.
4. Rayej, Shima. "How do self-driving cars work?." *Robohub*, 3 June 2014, robohub.org/how-do-self-driving-cars-work/.

Images:

1. Prater, Scott. "Airmen Upgrade GPS Constellation." *U.S. Air Force*, 1 June 2010, www.af.mil/News/Article-Display/Article/116502/airmen-upgrade-gps-constellation/.
2. Porta, Sebastian, et al. "File:Breathe-Camera-Web.svg." *File:Breathe-Camera-Web.svg - Wikimedia Commons*, 13 Oct. 2009, commons.wikimedia.org/wiki/File:Breathe-camera-web.svg.
3. Jarvis, A P. "File:Velodyne ProductFamily BlueLens 32GreenLens.Png." *File:Velodyne ProductFamily BlueLens 32GreenLens.Png*, 1 Feb. 2019, commons.wikimedia.org/wiki/File:Velodyne_ProductFamily_BlueLens_32GreenLens.png.
4. Becker, Dirk. "File:Distance Radar DR-1DHP 61 GHz Symeo.jpg." *File:Distance Radar DR-1DHP 61 GHz Symeo.jpg*, 3 Sept. 2018, commons.wikimedia.org/wiki/File:Distance_Radar_DR-1DHP_61_GHz_Symeo.jpg.
5. "File:Uber Self Driving Volvo at Harrison at 4th.Jpg." *File:Uber Self Driving Volvo at Harrison at 4th.Jpg*, 11 Apr. 2017, commons.wikimedia.org/wiki/File:Uber_Self_Driving_Volvo_at_Harrison_at_4th.jpg.