CS-499-Q2866 Computer Science Capstone

6-1 Journal: Emerging Technology and Artifact Update

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# Autonomous Cars

I decided to talk about autonomous cars because my wife said to me the other day that it would be nice to have a car that would drive us to see our families, four hour road trip, while we sit back and relax or in my case do homework, or hers would be to play games while the car did all the driving. In our area we are starting to see driverless cars only as a test but multiple companies like Uber are starting to increase their research in this technology. I know, that the market has tested these vehicles on Interstate 95, 495, 395 and Washington D.C. Companies like Tesla, next car of choice, and Google have been testing their technology which rely on GPS, stored maps, range-finders, cameras, and sensors to navigate without incident. If this is not a success or the cars fail, they have the human factor that can take over the car for a safe commute. Places like California, Michigan, Paris, London, Singapore and Beijing have cars that can drive themselves (Davies, 2018).

In the Washington D.C. and Northern Virginia area are already congested with high volumes of traffic and a commute can take hours just to go 30 miles. Another consideration is the vote for the worst drivers in country that has gotten better but I personally don’t see how the area escaped that poll. If a company like Ford, is successful in creating a driverless car that will carry customers and make deliveries for business we could see a potential to reduce accidents and vehicle death rates considerably. Considering the area, I live in and people getting up earlier every day just to beat the morning rush could help solve an issue of people falling asleep behind the wheel, making careless mistakes, or on their phones not paying any attention to the traffic. If business in the area would take part in this study, they could do an organized carpool where the vehicle did all the driving while utilizing the high-occupancy vehicle (HOV) lanes to reduce traffic and parking issues in these heavily populated areas. This is a great idea for today’s technology, but I am sure it will come at a high cost where people won’t be able to afford a driverless car. Though, city councils and local governments are looking at this technology to improve the unemployment rate in places like Ward 5 in Washington D.C which is an industrial area with a 10% unemployment rate. They are hoping to offer those unemployed away to get from one area to another for future employment (Laris, 2018).

# Optogenetics

We always have very interesting conversations while sitting around the dinner table and we were talking about super powers and which would you like to have when oldest son said mind reading or a mind power that can control one’s thoughts and actions led me to Optogenetics. As we learned at an early age when computers were emerging as the next big thing in technology that the Central Processing Unit (CPU) was the brains of the computer that uses electronic circuitry that carries out the instructions of a program which performs the most basic functions to the most complexed arithmetic, logic, controlling input/output operations and dataflow to and from other components of the computer. Our brains are the same which is the center of control for our entire body sending and receiving signals from every area of the body but, yet we don’t know that much about the brains function as a society. It amazed me that we had a breakthrough in this technology in 1971 yet it did not come together as a new technology till 2005. Optogenetics is the way that neurologist can make neurons respond to a certain light color using genetics. They can make specific neurons in the brain fire by using these different light colors that allow the neurologist to distinguish the different types of brain cells which gives them a better understanding on how the brain functions. This advanced technology can and will have major impacts on our society. This technic could change the how we approach depression, understanding Parkinson’s disease, Narcolepsy, and possibly cures for other brain disorders (Deisseroth, 2010).

# Update on Artifacts for the ePortfolio

I feel sense of relief yet a sense of urgency to complete this project. I run projects at work where just being off by one week has major impacts to the project and the timeline of other projects that depend on it being delivered on time. Well, I had major setbacks with this project where I had a working database and when I started to add more activities to the program that caused my database to crash. When I fixed the database, I lost functionality of my pages which caused me great frustration. When I used the debugging tools to help identify my areas that were faulty my debugger decided to give me connection port errors to 8600. Uninstalling the software did not correct the issues. I decided to change IDEs which showed me more errors within my database. The problems I had with my database wherew I keep getting errors on the password column. The program said the column didn’t exist which would not allow the user to be added to the program. This had great impacts leading to the information on the different destination sites as I was going to code the database the same way. I found that one small error in my database string for password (… + **“’”** + password + “‘”…) the double quote and single quote at the beginning of the password were missing which caused the whole set back. I did not find it because the debugger and Android Studio did not show it nor did the code analyzer till I switched to another IDE. Today was my break through after sitting here for hours starring at the database. Once, I had that figured out, my next problem was once you logged in to the application it would not load the next page to begin your search on the destinations. I had to hard code the clicklisteners to get this feature to work since the onClick listener in the IDE was not executing my method for the buttons. Now that I have fixed all my major errors I can move on and hopefully bring a fully functional application by the end of next week. I also had version control issues with getting my code to PUSH to my repository. I also noticed the repository kept grabbing my computer name as an author when I set up the repository to use my name and not my computer name as author when pushing commits. I have everything on local and will remove the repository at the end of this class because I don’t want my computer name and other information for the public to see and try different hacking techniques to gain access to my computer (not that I have anything on my network for a hacker) or use it as a pivot point for other attacks against organizations.

# References

Davies, A. (2018, 02 01). *The Wired Guide To Self-Driving Cars*. Retrieved from WIRED: https://www.wired.com/story/guide-self-driving-cars/

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