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Mr. Speice

Independent Study Mentorship 2A

18 January 2020

<div align="center">A Universe Full of Ideas</div>

<div align="center">Assessment 12 - Mentor Visit Assessment</div>

Mentor: Trey Blankenship

Profession: Software Developer

Location: Starbucks, 1401 W Campbell Rd, Richardson, TX 75080

Date: 11 January 2020

Time: 10:00 AM - 10:53 AM

Assessment:

To develop something that is truly unique, innovative, and ultimately makes a big difference in the world, one must have ideas that revolutionize a product in such a way it becomes more applicable and practical in consumer use. In my past mentor visit with Mr. Trey Blankenship, a software developer at Raytheon, we brainstormed ideas that would improve the overall performance of the product while also making it more accessible for consumer use. During this brainstorming period, we formulated three big tasks to complete: a graphical user interface, liveness or mobile phone detection, and dynamic face addition. There were also other minor tasks that we addressed in order to make the overall experience a better one.

The first aspect we addressed was the development of a graphical user interface. According to prior research, graphical user interfaces are becoming especially common in this modern-day and age because of the ease of using one. Because of this ease, it allows for projects such as mine to be easily accessible to the general public. Generally speaking, in order to use this

facial recognition base attendance tracker, you would need to be some type of software developer because of how the project is currently embedded in software development tools. However, with the development of a user interface, a regular person can simply tap a button and get the attendance tracker started and working without having to worry about software bugs of configurations. This, in turn, allows for the product to be used on a scale that is much further than what the technology industry can offer.

The second aspect we decided to address was liveness or mobile phone detection. As of now, the attendance tracker can be spoofed using a photo that is on paper or on a phone. However, liveness or mobile phone detection prevents this. This is because using liveness detection, which can differentiate between a photo and a real person, or using mobile phone detection which can find phones within the webcam, will not allow for the attendance tracker to be spoofed. This, in turn, allows for the practicality of the attendance tracker because it can no longer be manipulated which also increases software reliability, arguably the most important feature for all software created.

Finally, we wanted to make this application more flexible. This is why we decided to focus on dynamic face addition. As of currently, in order to add a face to the database, we would need to manually add it, something only a developer can do. However, in order to increase the user-friendliness of this application, dynamic face addition would allow people to add people to the database on the fly. This is especially important in order to make the application more user-friendly because the use of the product becomes significantly easier.

Finally, we wanted to address small minor tweaks to the project that would improve the overall performance infinitely. The first minor tweak would be implementing the late feature

using Python time stamps. This would allow for the features of the product to have a larger range of functionality. Additionally, it would increase the versatility of the project because of this larger range, allowing for a greater chance at consumer use. Another feature we discussed was offline mode because currently since the attendance tracker needs the internet to connect to Google Sheets API. However, with an offline mode, it can connect to an excel spreadsheet and format as needed on the spreadsheet. This would allow for the product to be used in more instances, causing the development of a more practical product. All things considered, when coupling these ideas into one, the development of a revolutionary new product is coming into the world soon.

Mentor Visit Notes