Mr. Speice

Independent Study Mentorship 2A

30 December 2019

The Machine Learning Life Cycle

Assessment 11 - Interview Assessment

Name of Professional: Sehul Viras

Title: Software Developer

Company: IntelliCentric

Date of Interview: 14 December 2019

Works Cited:

Sehul Viras, Informational Interview. 14 Dec. 2019

Assessment:

Computer vision is the process of analyzing the world around us through images and videos. However, the foundations of computer vision lie in the machine learning field. Machine learning has a complete life cycle that must be understood to gain a better understanding of the process of computer vision. During an interview with Sehul Viras, a deep learning engineer at IntelliCentric, we went over the machine learning life cycle and the significance of each step in the cycle.

To start the interview, we discussed all aspects of being a software developer. During this time, he discussed the necessity of learning new things within the field. While this was something I had heard countless times before, the motif of hearing this many times displayed the true importance of this aspect of becoming a software developer. Going forward, this idea has

been engraved into the future of my career as I walk forward in the journey to becoming a full-fledged software developer.

Continuing the conversation, we move onto the actual technical component of the machine learning world. During this, we talk about the general machine learning flow starting from preprocessing datasets to inferring and predicting. This was especially important to know for the future of the original work and final product because machine learning will be used to implement additional features to the attendance tracker such as liveliness detection. In knowing the machine learning life cycle, it will be easier to know what exactly to do to output the best results and achieve the end goal.

The next topic we covered was transfer learning. Transfer learning was something that was not implemented into the original work but would prove to be immensely helpful and allow for the original work to be far more practical. Transfer learning uses the idea of small data sets and a pretrained model. Generally, people using my original work would not have access to thousands of millions of images of a single person; however, using transfer learning they would only need one image to train the model. This, in turn, allows for the project to be more applicable to more classroom-based circumstances. Because of the discovery of transfer learning, the original work has become very practical for mass use going forward.

To conclude our discussion, I addressed a large problem I was currently was facing: computing power. Mr. Viras recommended I look into cloud computing platforms such as Google Cloud or Amazon Web Services. This will be helpful when considering application performance and hardware safety. In doing this, the laptop will not reach high temperatures

allowing for a longer hardware lifetime while allowing for the application to run smoother and more accurately.

During this interview, many problems regarding the future of the original work and final product were resolved. Because of this interview, my knowledge in both the computer vision and machine learning fields has expanded to a new magnitude. All things considered, this interview served as a stepping stone into a world full of opportunity, idea, innovation, and interest: it was the interview for the start of the future.

Interview Notes