

Mr. Speice

Independent Study Mentorship 2A

29 November 2019

A Look Into Image Processing

Assessment 9 - Interview Assessment

**Name of Professional:** Vijay Nidumolu

**Title:** Software Developer

**Company:** Samsung Electronics America

**Date of Interview:** 24 November 2019

**Subject:** A Look Into Image Processing

**Works Cited:**

Vijay Nidumolu, Informational Interview. 24 Nov. 2019

**Assessment:**

A large part of the machine learning field is the pre-processing that occurs prior to the application being run. This can mean creating models for a machine-learning algorithm to apply later on or in the field of computer vision, creating image models. In order to create accurate image models, image processing must be utilized and optimized to the fullest extent. During the interview with Mr. Vijay Nidumolu, I had the chance to get a first dive into types of image processing algorithms and broaden my scope within the field of computer vision as a whole.

To start the interview, we discussed custom created models. Through this discussion, I learned that custom created models would not be advantageous for the original work process. This is because the breadth of knowledge required to create one is immense and it is something that may be worth pursuing when there is more time. This serves to be useful going forward

because it allows me to find alternatives and allocate my time as necessary. Despite the drawback of using a custom trained model, Mr. Nidumolu offered alternatives such as using python libraries as a commodity. Using these python libraries is something that should be looked into going forward because it will immensely help simplify the design process of the application. This serves to be helpful both time-wise and performance-wise because of the hours spent to develop these libraries.

To continue our conversation, we discussed actual image processing algorithms and the use of histograms with image processing algorithms. Through the discussion, my knowledge of histograms and these algorithms greatly broadened as image processing was a field that was completely untouched through my research. Because of this newfound knowledge, explaining how image processing functions in layman's terms will be much easier. Additionally, now I know a great variety of image processing algorithms that can be used for the original work. This is beneficial because some algorithms may work better than others so through testing the best one can be found.

To conclude our discussion, we discussed my original work and ways to potentially improve it. A large part of my original work is accuracy and so through this discussion, we discussed a variety of methods to improve the accuracy such as calculating blur amounts. Because of this discussion, both the image processing aspect and video analysis will be more refined. Additionally, this feedback is beneficial because it is feedback from an actual professional in the industry and so the final production of the original work will not be a high-school level project but rather an industry level product. We also addressed potential future challenges that may occur and how exactly to overcome them. In doing this, I am more prepared

to overcome these obstacles or similar ones. All in all, massive improvements occurred because of this discussion.

To conclude, this interview allowed me to explore an important world that I had never touched before. Because of this new world, there have been significant foundational leaps within my research that have answered several unanswered questions. All things considered, the knowledge gained from this one interview has been powerful in gearing the future of my ISM career and career as a whole.

### [Interview Notes](#)