Individual Contributions - Varun Singh (37195892)

My contributions towards this final outcome largely revolved around the data preparation stages. In particular, I was responsible for downloaded, formatting, and annotating the data. Once this task was completed, data manipulation and training was handed to Riley. After facing significant difficulties, I was once again handed the project. To this end, I proceeded to debug and gradually install the CUDA dependencies as well as the required libraries. Finally, due to superior computer hardware, my machine was used for data training. In the course of this training, I was able to manipulate the hyperparameters in order to ensure that the script could run without issues for extended periods of time. Ultimately, the total number of iterations ended in the 5300-5400 range, all of which were performed on my machine. As a direct consequence, all testing was also done on my machine (to minimize data transfer of the very large weight files). Finally, I contributed a significant portion of the final report. In addition to this document, of course, I was the primary writer for sections 3, 4, and 6 of the final report. In addition, the provided figures in these sections were drawn by me using Adobe Software.

In terms of my experience, I learned a lot about the finer details of engineering a Machine Learning solution from start to finish. In the many hurdles we faced in integrating our many frameworks and designing intelligent solutions, I feel like I now have a greater understanding (and appreciation) of functioning intelligent systems. Specifically, I am now very familiar with using and employing the CUDA toolkit as well as the Darknet Deep Learning framework -- two highly useful skills in Machine Learning.