

Team sdddec20-19 Report 3 (02/17/20 - 03/01/20)

Summary

In the last two weeks, our team has finalized our research of object detection softwares and continued studying Python. At this point, we have decided to use YOLOv3 in combination with OpenCV. Additionally we may use TensorFlow to train the neural network later to work best for our classrooms. The main reasons we've chosen YOLO over other neural network are that YOLOv3 has a large amount of documentation available. It also has lots of community support and is one of the most popular algorithms. Furthermore, YOLOv3 is relatively easy to modify and retrain. The network allows for relatively easy modifications as well and training data can be added. Finally, YOLOv3 is free and open source and the speed of the algorithm allows us to run it multiple times.

Individual contributions

Member	Contributions	Hours	Cumulative Hours
Brandon Johnson	More Research on Object Detection Softwares, Attended Team Meetings	7	21
Angela Shauer	More Research on Object detection Softwares, Worked on Design Doc, Attended Team Meetings	8	27
Lance Demers	Worked on Design Doc, Attended Team Meetings	6	18
Connor Sullivan	Explored Yolo, Worked on Design Doc, Attended Team Meetings	7	17
Nathan Oran	Worked on Design Doc, Attended Team Meetings, Wrote This Report	6	19.5

Pending Issues:

N/A

Plans:

From here, we have begun making a general sketch of the software model and are going to set up Brandon's personal Raspberry Pi, for us to start testing software on what our hardware will be like.