Team sddec20-19 Report 2 (02/03/20 - 02/16/20)

Summary

In the last two weeks, our team has focused our efforts into our research of object detection softwares and studying Python, the language we will use on the Raspberry Pi to implement the software for our project. Right now, we are trying to find out as much as we can about the technical aspects of specific algorithms and machine learning neural networks. So far most of our research has been on Yolo, Luminoth, and their dependencies on machine learning libraries such as openCV or TensorFlow. Although it is not a major concern, we also need to consider the size of the libraries and neural networks that we decide with respect to the storage capacity of our Raspberry Pi. We are also considering the complexity of implementation, training the neural network to specifically learn classrooms and students, and most importantly the accuracy of the system.

Individual contributions

Member	Contributions	Hours	Cumulative Hours
Brandon Johnson	Update website, research and investigate object detection algorithms, requested virtual server from ETG, began preparing personal raspberry pi for team development.	9	14
Angela Shauer	Research and investigate object detection algorithms, and organize google drive.	10	19
Lance Demers	Research object detection algorithms.	8.5	12
Connor Sullivan	Study Python, research object detection algorithms, and update website.	7	10
Nathan Oran	Study Python, research object detection algorithms, update website, collect and edit audio for Lightning Talk, and write this report.	10.5	13.5

Pending Issues:

From the last reporting period, we are still working on choosing a neural network. The software and algorithms are all difficult for us to understand, we aren't certain we've researched enough of them fully enough to make an educated decision.

Plans:

From here, we plan to finish our research of different object detection software by early this next week. To accomplish this, Brandon created a template of questions to answer for any library that we find to have specific things to talk about for each one. We also plan on having more focused and hands-on research of implementing these libraries. We hope to make a decision by the middle of this week so we can all familiarize ourselves with the selected software, and begin working on prototypes of the software and make decisions about other aspects of the project next week.