

Weekly Report #6

CPR E 491
Team 26
Robot League
11/1/2021 - 11/7/2021

Members:

Brogden Worcester - Client interaction

Dalton Holdredge - Document submitter/creator

Noah Brooks - Hardware team leader

Joseph Holtkamp - Software team leader

Jordan Suby - Individual component design

Cheyenne Smith - Team organizer

Tejas Agarwal - Finance officer

David Quan - Progress coordinator

What we've accomplished in the past week / what we've been researching:

Brogden Worcester - Scheduled a meeting with ETG this Wednesday to go over how to use and operate the electrical machine shop in Coover. Reaching out to [Mark Wyant](#) about old electronic parts.

Dalton Holdredge - Researched different methods of training custom object detection models. Deployed the `ssd-mobilenet_v2` model to the raspberry pi. Successfully trained a custom model using transfer learning to detect the 5 specific images needed for our project. Successfully deployed the custom model to the raspberry pi.

Noah Brooks - put in some work with GUI development in hopes to gather the data from the game in one location. Research in data streaming.

Joseph Holtkamp - I've learned how to change between separate views/widgets in Flutter as well as how to manage widgets in different files.

Jordan Suby - Worked on getting Flutter working on my laptop and the YouTube interview for our weekly assignment.

Cheyenne Smith - Looked into ways to apply video streaming to flutter

Tejas Agarwal - Looked for the Arena parts for scoring

David Quan - getting a database connected to flutter application

What we're planning to do in the coming week:

Brogden Worcester - Get training on the ETG machine shop. Start 3D printing process. Schedule more lab training at other shops if necessary. Build and test speaker from ETG.

Dalton Holdredge - Classify ~200 new images to use to improve the model. Improve upon the current model's inference speed and accuracy. Research methods for improving performance of the object detection model. Meet with hardware and software, and come up with specific goals for the hardware team.

Noah Brooks - hopefully finish the GUI and figure out the best way to stream data

Joseph Holtkamp - This next week I will be learning about formatting and layouts in Flutter. This is because the issues I had last week related to the placement and formatting of widgets caused me the most trouble and were notably slowing down my progress. Additionally, I still need to add video elements in a widget form which is related directly to formatting and layouts.

Jordan Suby - Get working test code and push it to Git

Cheyenne Smith - Hoping to get video streaming to work. At the minimum, get the skeleton outlined.

Tejas Agarwal - Discuss with the team and finalize the components we would be using

David Quan - Figure out how to make a nice ui for profiling

Issues we had in the previous week:

Brogden Worcester -

Dalton Holdredge - My computer didn't have enough processing power and would have taken over 6 days just to train the model, and then I got kicked out of the Google Colab's GPU since I used too much of the memory on their server. We had to reset the OS on the RPi since we had so many failed attempts to download software and other items.

Noah Brooks -had to reset the pi

Joseph Holtkamp - Formatting and layouts were more challenging than expected. Additionally, external projects consumed my time.

Jordan Suby - The usual time management

Cheyenne Smith - Other classes, and personal issues.

Tejas Agarwal - other class assignments are taking longer than expected.

David Quan - busy with assignments and interviews.