

# Weekly Report #3

CPR E 491  
Team 26  
Robot League  
10/17/2021

## 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 - Explored the Hive and Student Innovations center for available resources. Found a list online from a professor called resource hub. I also explored the robotics design club area. Met with the hardware team on future plans and physical layout / rules for the project. Checked out some hardware from ETG.

Dalton Holdredge - Met with hardware team to discuss progress we've made and solidify some specifics for the game and robot design. Looked into specific machine learning models for use with raspberry pi, and how to classify objects for use with the object detection model.

Noah Brooks - Met with hardware team on future plans and physical layout / rules for the project. Ordered some parts and drafted the goal design

Joseph Holtkamp - This week, I got Flutter working on my personal laptop and started tooling around with the framework. I also spent some time investigating different tools to stream live video feeds. Our app-dev team met on Monday and drew out a high level diagram of our application and the interactions that need to happen.

Jordan Suby - Attended app-dev brainstorming meeting on Monday. Continued Coursera course work and started looking into Flutter as that seems to be our current preference for writing multi-platform code.

Cheyenne Smith - Met with the software team to brainstorm implementation of control of the bot and how to store data from sensors. Worked on researching docker and flutter for implementation later.

Tejas Agarwal - Met with the hardware team and brainstormed on future plans and physical layout / rules for the project. Did a little research on how the design of the robot should look like.

David Quan - Helped create the slides and design documents for this week's due date. Started watching videos on flutter and how it functions for upcoming frontend development.

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

Brogden Worcester - Find the 3D printers and laser cutting resources and research the feasibility of using these resources. Experiment with using a speaker on a breadboard. Bring LEDs and other hardware in for available use by the team.

Dalton Holdredge - Create training model for object detection on the bot. Successfully execute embedded machine learning on the bot using TensorFlow Lite and the altered neural network using our data set to detect objects with the camera. Try to figure out the speed with which this NN will accomplish image classification.

Noah Brooks - I will set up the Object detection bot and start work on building the data sets to be used later.

Joseph Holtkamp - I plan on building some simple UI's in flutter, creating some screen diagrams, and experimenting with video transfer over connections.

Jordan Suby - finish coursera course on machine learning, get started writing test code, attend weekly meetings and work towards any new goals established there.

Cheyenne Smith - More research in docker and flutter. Hopefully get some test code written.

Tejas Agarwal - Continue working on the design of the robot and the rules for the league.

David Quan - Plan on creating a basic UI and help other members if needed.

## Issues we had in the previous week:

Brogden Worcester - None

Dalton Holdredge - No real big issues, but the object detection model I first used probably won't be able to be used for our application.

Noah Brooks - No issues.

Joseph Holtkamp - Just a lack of time. I have a lot of projects and work going right now consuming my time.

Jordan Suby - I had a lot more competition for my time this week than normal and most of my productive hours were spent on my other class as the due date for that project was sooner and in the end I still struggled to finish it on time.

Cheyenne Smith - Lack of time and mental health issues coming up and having to deal with. Currently I have a lot of projects and homework to do and do not have enough time right now.

Tejas Agarwal -

David Quan - Tests are coming up and have had less time.