EE/CprE/SE 491 Weekly Report #2

Feb 2nd - Feb 16th, 2020

Group Number: 3

Project Title: Squirrel

Client: Bob Thompson, Advisor: Gary Tuttle

Team Members: Isaac Tegeler, Devon Driscoll, Richard Cushing, Dan Gilbert, Abraham, Cole Patton

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Weekly Summary:

Worked on the Lightning talk which helps narrow our thoughts more on requirements and how they will define our roles.

Past week accomplishments

Isaac: Did not do a lot. Was sick all week and did not think about this class. I did set up the gitlab page and write out the initial project requirements, but that was it.

Devon: Updated team website with pictures of the deck that our machine(s) will need to defend. Uploaded our teams first Bi-Weekly status report to the website as well.

Pending issues:

Isaac: Was sick. Did not complete the work that I needed to.

Hours Worked

Name	Contributions	Hours this week	Hours cumulative

Isaac	Project documentation	2	8
Cole	Researched similar existing projects and looked into machine vision. Lightning talk 1: Helped write the software development standards and presented the hardware project requirements. Gathered the groups voice recordings to make our submission.	6	12
Devon	Helped with project requirements (software development process), lightning talk 1, and the team website.	6	10
Richard	Researched turnkey launcher possibilities of ping-pong balls. Found additions LT #1:Wrote Mechanical requirements and detail. Helped with hardware requirements, particularly on the electrical side.	6	12
Abraham	Helped with project overview and requirements presentation. Uploaded bio to team	4	8

	website. Researched power supply options.		
Dan	Researched machine vision projects and launching mechanisms. Wrote and recorded EE standards for lightning talk #1.	4	8

Plans for the upcoming week

Isaac: Since I have not done hardly any work for this class I have a lot to catch up on. I need to determine the hardware requirements for the computer vision side of this project which I expect to take the entirety of the next two week period. I will need to download and install the packages to my computer and monitor the resource utilization when running the network that we plan to use. I also need to determine how much other computational resources will be needed for the other sensors. Since I am in charge of meeting planning I will also need to set up meetings with the group so that we can start to work on the larger design of the project and the rough draft of the design document. I plan to coordinate a meeting for Tuesday and Thursday this week depending on people's availability. After we meet and have some real ideas put together I will also schedule a meeting with our advisor to go over our plans and to get feedback.

Cole: For the next two weeks I plan on doing a little more research, and then starting to work on real time detection using my laptop's camera. So far I am planning on using a program called "YOLO" (you only look once) https://pjreddie.com/darknet/yolo/ as I believe this program uses a neural network that can be trained to work perfectly for this project.

Devon: As one of the two SEs on the team, I plan on catching up with our software requirements to see what we'll need to start with basic detection (as we'll need to be able to detect squirrels).

Richard: Plan to meet with Garry Tuttle to talk about power requirements and how much circuit design will be necessary. Working on the first draft of our design with teammates.

Abraham: Continue looking into power supply options, specifically rechargeable battery power. Work with team members to create our first draft of design. Coordinate with team to meet with faculty advisor.

Dan: Meet Tuttle and work on design with teammates.