EE/CprE/SE 491 Weekly Report #3

Feb 17th - Mar 1st, 2020

Group Number: 3

Project Title: Squirrel

Client: Bob Thompson, Advisor: Gary Tuttle

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

Reyes-Rodriguez, Cole Patton

Weekly Summary:

This past week we completed the Design Document and met with our faculty advisor. This

helped us to break down or different ideas into actionable items.

Past week accomplishments

Isaac: Worked on design documents and helped to develop initial prototype sketches.

Organized a meeting with Dr. Tuttle and met to get feedback on ideas. Documented meeting

results and posted on gitlab. Found potential solution for camera system and have an initial plan

for the squirrel detection set up.

Devon: Worked a little on the design document. Met with Dr. Tuttle to discuss where we are with

our processes as well as getting a better idea of where we should be as we continue to work

throughout the semester. Researching ways to do image recognition as I have no previous

experience in that area. Brainstormed back up ideas if our current launcher doesn't work out

(we could use something similar to a tape measure that would extend out toward the squirrel).

Cole: Worked on the design document. Further researched YOLO object recognition and downloaded most of the required software.

Richard: Went through the design document with Dr. Tuttle to show our initial thoughts on the design. Met with Mechanical Engineers to get different opinions on how to implement the pitch and yaw of the launcher as well as what to use as a launcher.

Pending issues:

Isaac: Made up time from being sick. Found solution for the camera system will begin moving forward with getting some initial parts to start prototyping.

Richard: No single launcher idea stands out between all their pros and cons. Pricing, noise level, and implementation of turnkey vs homemade solution are all being particularly difficult issues to decide on.

Hours Worked

Name	**Contributions**	**Hours this week**	**Hours cumulative**
Isaac	Organized meetings to get initial design done, and get feedback from faculty advisors.	10	18
Cole	Researched YOLO for object detection. Worked on the design document.	4	16
Devon	Meetings, research,	8	18

	brainstorming, design documents.		
Richard	Helped develop initial design planning for mechanical and electrical for design document	8	20
Abraham	Researched and helped with design documents.	2	10
Dan	Researched mechanical and electrical design elements for design document and advisor meeting	6	14

Plans for the upcoming week

Isaac: For the upcoming week I will schedule a meeting with the group to work on section 4 of the design document where we create a project timeline. Will also work with ETG to find good sensors for motion detection as well as a controller to get feedback from them. Goal is to have ordered the sensors and a controler by the next biweekly report.

Cole: For the next two weeks I plan on furthering my image recognition research. Hopefully we can get a working example for this iteration.

Devon: Continuing research into image recognition and continuing to meet with the team to keep making progress.

Richard: For next week, plan to work with Isaac on which sensors we should use and start to develop a parts list and sourcing.

Abraham: This past week I have been out with the flu, so my goal for these next 2 weeks is to get up to speed on the project. From there, I hope to find a specific role to play and continue helping.

Dan: In the next 2 weeks, I plan to meet with the team to discuss power and sensor requirements, propose specific solutions, and continue editing the design document.