

## EE/CprE/SE 491 WEEKLY REPORT 5

Date Span:

March 9th - March 15th

Team:

sddec19 - 17

Project:

Goose Chaperone

Client/Advisor:

Dr. Randall Geiger

Team Members:

Johnson Phan

Weston Berg

Alec Morris

Woodrow Scott

Zhihao Cao

---

### Summary

---

This week continued research into respective components, technologies and other areas. This included discussions on alternative designs and components, as well as discussion on important near-future progress.

These discussions went particularly in depth into whether our design should be a two or four wheeled robot. If a two wheeled robot we also discussed what the balance of the robot would be such as a teflon strip, ball wheel, swivel wheel, gyroscope, etc. and which of these alternatives is the most feasible.

In terms of sensors, there was debate on what exactly we need to accomplish our task of identifying geese. One sensor we will need for sure is an IR sensor to measure the distance to objects. We will also need an imaging camera to capture shots of the robot's environment and determine if a goose is present. One tentative sensor that we might employ is a heat sensor which would help to confirm if there is actually a goose present or not via its heat signature.

---

### Accomplishments

---

- Johnson Phan: Made Several plans cheap and efficient robotic structure.
- Weston Berg: Made final decision on wheels and motors to purchase
- Alec Morris: Found a few servomotors to choose from. Looked into how they might connect to the beagleboard. Limited hours as I was busy studying for midterms.
- Woodrow Scott: Continuing to test tensorflow locally.  
I have looked into comparisons for webcams suited for image recognition, and it does not seem to make much difference in most options.
- Zhihao Cao: researching on sensor inputs and outputs and correspond to Beagle inputs and outputs

---

### Time Contributions

---

Team Member	Hours Contributed	Cumulative Hours Spent
Johnson Phan	2	18
Weston Berg	3	24
Alec Morris	2	17
Woodrow Scott	3	20
Zhihao Cao	4	12

---

### Client Meeting

---

There was no meeting this week as the client was out of town.

---

## Future State

---

Johnson Phan: Preparation for Beaglebone programming application. Start developing Analysis Designs for implementing robotic coding. Require team decision On selecting plans for robotic structure model.

Weston Berg: Order wheels and motors after spring break  
Construct potential 3D model for robotic configuration alternatives  
Begin constructing the first prototype

Alec Morris: Made final decision on servo and said making the initial version of the design document.

Woodrow Scott: I still have a lot of work to do with tensorflow, I hope to have working tests by the end of the week.

Zhihao Cao: looking for sensors' price and plan to get components of robot.