

## EE/CprE/SE 491 WEEKLY REPORT 4

Date Span:

March 2nd - March 8th

Team:

sddec19 - 17

Project:

Goose Chaperone

Client/Advisor:

Dr. Randall Geiger

Team Members:

Johnson Phan

Weston Berg

Alec Morris

Woodrow Scott

Zhihao Cao

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### Summary

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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.

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### Accomplishments

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Johnson Phan: Found Python codes and instructions set for motors and servos.  
Found information on how to use GPS in Python.

Weston Berg: Completed research on pre-made chassis  
Completed analysis on best motor type for our project  
Reported findings to group and refined chassis direction

Alec Morris: Looked into GPS modules and what frequency our platform  
might prefer.  
Looked into methods to interface the GPS with the controller.  
Began looking into gear motors and servos.

Woodrow Scott: Researched topics on how to train TensorFlow networks  
Looked into Python API's for TensorFlow  
I have been attempting to find other projects that have used  
BeagleBoards and Tensorflow together.

Zhihao Cao: found thermal sensor data input matched with Beagle, found information on distance sensor

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Time Contributions

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Team Member	Hours Contributed	Cumulative Hours Spent
Johnson Phan	3	15
Weston Berg	3	21
Alec Morris	2	15
Woodrow Scott	4	17
Zhihao Cao	4	12

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Client Meeting

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Discussed preparations to look for cheapest and best materials to construct the Chaperone.

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Future State

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Johnson Phan: Looking into Eltech materials for constructing robotics. Looking into wiring pieces for connecting components to Beaglebone.

Weston Berg: Make final decision on motor model to order  
Make final decision on wheel type to order  
Begin draft of potential custom chassis designs

Alec Morris: Will continue servo and gps research. Will be specifically looking for a servomotor that meets our needs that could rotate cameras and sensors to obtain a full field-of-view.

Woodrow Scott: I am mostly concerned in getting a working example of image recognition and practicing with the concepts. Additionally, I am going to look into cameras that are suited for image processing.

Zhihao Cao: looking for how to connect sensors with Beaglebone and works well.