EE/CPRE/SE 492

Weekly Report 11

Goose Chaperone

SDDEC19 - 17
09/16/2019 - 09/27/2019

Client/Advisor:
Randall Geiger

Team Members:
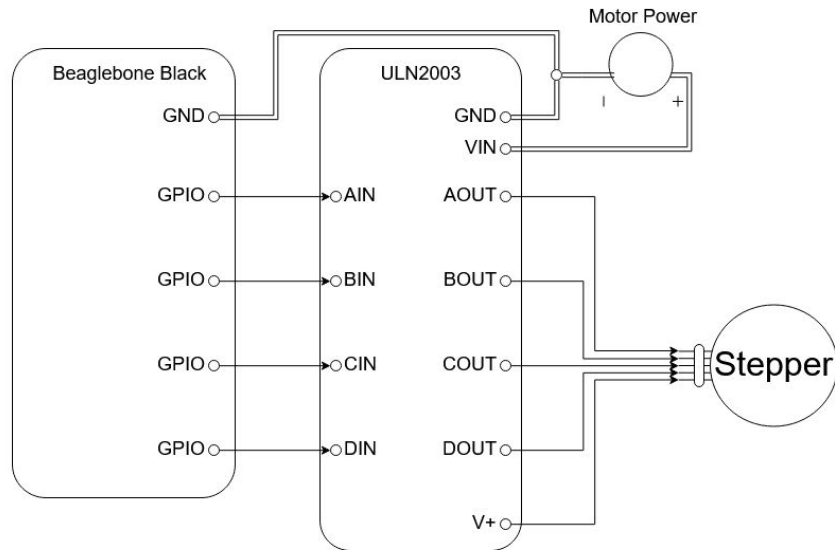Weston Berg
Zhihao Cao
Alec Morris
Johnson Phan
Woodrow Scott

Past Weeks Summary

Reconnect with our advisor and discuss potential issues and results. Each member will continue with their original tasks. Final structural design of the goose chaperone is near completion and require final considerations to configure the imitation function.

Past Weeks Accomplishments

- GPS development - Alec
  - Implemented basic code for GPS
- Near Completion of Final Design - Johnson
  - Primary PVC pipe structure design is ready to be checked and ordered
  - Imitation installation will be postponed until the prototype is ready
  - https://docs.google.com/presentation/d/1sAYcHTR08hBpP_9KkZj_mUwRos7QZ1mQbM09X4flj6E/edit?usp=sharing
- DC, Servo, and Stepper motor drivers - Weston
  - Implemented drivers for these different motor types
  - Created system diagrams of Servo and Stepper motor connections

- Image downloader/Sorter - Woodrow
  - Allows automatic image set downloads to save manual time
  - Can run in the background for long periods of time
  - Still need to fix a bug when using the Google Image API
- Small prototype build -Weston
  - Built the small prototype for testing of components

Pending Issues

N/A

Individual Contributions

Team Member	Hours (Report Duration)	Cumulative Hours
Weston Berg	19	72
Zhihao Cao	4	31
Alec Morris	4	36
Johnson Phan	9.16	41
Woodrow Scott	9	48

Plans For Upcoming Weeks
- Johnson Phan
  - Assist Woodrow with Tensorflow programming
- Zhihao Cao
  - Continue distance sensor development.
- Alec Morris
  - Connect GPS module to beaglebone
  - Develop API for GPS.
- Weston Berg
  - Create driver for camera manipulation
  - Test and tune motor drivers on the small prototype
- Woodrow Scott
  - Testing new pre-rendered models, using remote build pipeline
  - Finish image downloader/tagger
  - Update downloader to include and automatically sort different target images by name
  - Upload images as a tar.gz to keep bulk data off of gitlab

Weekly Advisor Meeting Summary
We summarized what we currently have with our advisor. Afterward, we discuss what each member should do. Weston will continue to development of the motors for our robot. Zhihao will continue sensor development. Alec will continue development of GPS codings for the Beaglebone. Woodrow will continue to implement codes for camera to identify Canadian geese. Johnson will attempt to finalize the PVC prototype design and learn Tensorflow to assist Woodrow by next week.