

Team 22

Project Title: Rabbit

Date: 10/14/2021

Member role this week:

- Samuel Fuller – Worked on design powerpoint/lightning talk, general CV research
- Ben Dunkerton- Created list of parts to order
- Marshall Bozo- App lead
- Lars Lofquist- RC car lead
- Darron - Design document lead
- Kevin Scanlon - Worked on design powerpoint, researched computer vision more
- Darrshen - Researched image processing

What we've accomplished in the past week/what we've been researching

- Samuel Fuller – Worked on design powerpoint/lightning talk
- Ben Dunkerton-Worked on design powerpoint/lightning talk and presented in class
- Marshall - Worked on design powerpoint/lightning talk and presented in class, Worked with Lars on lab testing the RC car
- Lars - PWM control of RC car steering, helped with the design powerpoint and presented in class
- Darron - outlined the design document and presented in class
- Kevin Scanlon - design powerpoint presentation and presented in class, computer vision
- Darrshen - Found ways to integrate image processing into microcontroller, Worked on design powerpoint/lightning talk

What we're planning to do in the coming week

- Samuel Fuller – research how we can use reinforcement learning with Computer Vision for more efficient and precise lane following.
- Ben Dunkerton- image processing model
- Marshall - React Native
- Lars -work on PWM control of RC car motor

- Darron - Computer Vision
- Kevin Scanlon - work on testing document and more research on CV integration
- Darrshen - Continue researching image processing

Issues we had in the previous week

- Samuel Fuller – waiting for our client meeting to confirm our design and order parts
- Ben Dunkerton- waiting for our client meeting to confirm our design and order parts
- Marshall - waiting for our client meeting to confirm our design and order parts
- Lars - Using correct gauge wires for PWM control
- Darron - waiting for our client meeting to confirm our design and order parts
- Kevin Scanlon- waiting for our client meeting to confirm our design and order parts
- Darrshen - waiting for our client meeting to confirm our design and order parts

Weekly Notes:

met with Kris and went over large project goals

asking Kris about where we want to go with multiple cars

- focus on one car to phone communication
- maybe in the future (once a single car works) try to make multiple cars connect to one
- the microcontroller we have has a networking(?) function
- first prototype is a group of people following the rabbit (in lane 1/2/)

Maybe try to have the car follow a single line at first instead of staying in the middle of two lines.

make an outline for a Car Calibration setup guide/routine

Bluetooth LE proximity stuff?

A runner should stay about X distance behind the Rabbit

FUTURE IDEA: Rabbit identifies where the runner is on the track and adjusts in a reasonable manner

Laser line/box projected from the Rabbit as a pace line

maybe we can use a smaller motor to conserve power

PRODUCT TWO: create a product to track field athletes speed/movements

Multiple checks for speed/distance measuring

Any way to make the motor and servo control digital to be more precise

GET TO A MILESTONE so we can go have an informal dinner meeting