CPRE 491 Weekly Report #1

Team 22

Project Title: Rabbit

Date: 9/30/21

Member role this week:

-Samuel Fuller – Help create requirements presentation and

-Ben Dunkerton- Create presentation for project requirements

-Marshall Boser- Create presentation and record voiceover for project requirements.

-Lars Lofquist- Research platform to use (car) and microcontrollers to interface with

-Darron Anderson-Write the template for the project requirements presentation

-Kevin Scanlon - Turn project requirements into powerpoint presentation

-Darrshen - Research automatic control system for car's operation

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

-Samuel Fuller – Worked on project requirements

-Ben Dunkerton: Read research paper about computer vision, created rough draft documents for team assignments

-Marshall Boser- Have learned about funding for the project. Also did some research on app development.

-Lars Lofquist- Researching different microcontrollers and their functionality

-Darron Anderson- Found a computer vision tutorial, made the requirements presentation template

-Kevin Scanlon - Researched computer vision

-Darrshen - Researched image processing for the pace car

What we're planning to do in the coming week

-Samuel Fuller – look into processing needed(hardware) for computer vision and overall power consumption expectations

-Ben Dunkerton- look into how to we can use computer vision for line detention and how to create a failsafe if the car gets off track

-Marshall Boser- Research React Native for the app development.

-Lars Lofquist- Iron out hardware requirements for the vehicle, microcontroller choices and

-Darron -Turn requirements into powerpoint

-Kevin Scanlon - Turn requirements into powerpoint presentation

-Darrshen - Make progress with the car's control system

Large Group goals for next week:

How to connect the transmitter from the car to the app.

Will Bluetooth work for us if the car's transmission systems doesn't work

Can we change the frequencies the car transmits?

How to create the app so it works with IOS and android(React Native).

What length of battery life can we expect taking into account the power of the car and the control system.

Turning sensitivity of the car and whether or not to bypass the car's steering control.

Look into processor specs and how those will talk to each other and talk to the car.

HOW TO CONNECT MULTIPLE CARS TO A PHONE.

Sam, Ben, Marshall, and Darron make the lightning talk.

Issues we had in the previous week

-Samuel Fuller – how autonomous do we want to car to be for object detection, making time to research

-Ben Dunkerton- How do we ensure autonomy if the car gets off its line/the track

-Marshall - how do we connect multiple cars to the app

-Lars - Do we need two processing devices or can we get by with just one.

-Darron - Will computer vision work for this project, we should plan for a kill switch, finding time

-Kevin Scanlon- do we need the GPU of the Jetson Nano or can we get by with a cheaper Raspberry Pi

-Darrshen - make sure the car has a steering sensitivity that will work for our project