

CprE 491 WEEKLY REPORT 09

11/8 – 11/14

Group number: 8

Project title: Race of Doom

Client &/Advisor: Dr Bigelow

Team Members/Role: Alex Crandall, Wesley Jansen, Elizabeth Schmitt, Ben Towle, Lalitha Vattiyam

- **Weekly Summary**

This week we worked with the RealSense SDK in depth and tried to improve the latency. We primarily worked on our lightning talk and refined our presentation skills as a group. Through our lightning talk we got some great feedback one of which was really helpful to use limelight for the RealSense camera which would improve our latency from 30 fps to 90 fps. We kept working on the car still to configure our high-level schematic in real life with the components and sensors that we have.

- **Past week accomplishments**

- Team Member 1: Alex Crandall: Met with the group to assemble our components along with practicing our Lightning talk presentation we had to give this week.
- Team Member 2: Wesley Jansen : Looked at the car body and components left on it figuring out how they each work via their manual and started to construct circuit to power car and control it without remote control. Worked on Lightning talk to present.
- Team Member 3: Elizabeth Schmitt : Connected Ultra-Sonic Sensors to the Raspberry Pi 5 so that we can process the data received from them. Worked on the Lightning Talk Presentation that we had to give this week. Gave the Prototypes Lightning Talk.
- Team Member 4: Benjamin Towle : Checked out the needed parts from ETG, Researched how each component can connect to the Raspberry Pi processing board, and assisted with Vehicle deconstruction along with Lalith.
- Team Member 5: Lalith Vattiyam: I ran some basic testing on the RealSense camera to provide a basic video on the functionality to show the class during our lightning talk.

- **Pending issues**

Our current pending issues are using the Raspberry Pi and increasing the latency for the RealSense camera. Both of these issues should be resolved fairly soon as we have possible solutions for both of them. For the Raspberry Pi we got the SD card from ETG which is crucial for running the OS on our computers. For the RealSense camera, as discussed before, we will be using limelight as a way to improve our latency.

- **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Alex Crandall	Practiced lightning talk along with looking over our newly gathered components to prepare for basic assembly.	6	53
Wesley Jansen	Learned how components on car work. Did lightning talk. Started circuiting	8	55
Elizabeth Schmitt	Hooked up Ultra-Sonic Sensor to Pi. Wrote lightning talk. Presented lightning talk	7	54
Ben Towle	Ordered the necessary parts needed to design our Vehicle HW. Including the Webcam and Raspberry Pi. Added to the Design Documentation as well.	7	55
Lalitha Vattiyam	Worked with the group to disassemble the car and brainstormed ideas for assembly	7	54

***Starting cumulative hours count on weekly report #1**

- **Plans for the upcoming week**

- Alex Crandall – Gather a more realistic feel of the scope of our project for the faculty panel that is upcoming, along with experimenting on new component connections.
- Wesley – Work with Alex on circuits to make car move.
- Elizabeth – Help with assembly and finalize skeleton code for basic movement of the RC vehicle.
- Ben – Continue researching both the webcam and rplidar sensor's sdk's and determine which location on the vehicle is the most optimal for each sensor.
- Lalith – Kept the group on pace to get the sensors and SDKs connected. Also led the group for presentation practice.

- **Summary of weekly advisor meeting**

We did not meet with our advisor this week as we meet with Dr. Bigelow every two weeks. However, last week, when we met with Dr. Bigelow, we discussed the issues we were having with the SDKs and the Raspberry Pi. We were given some resources to guide us to have one

centralized SDK and were told to talk to ETG about an SD card to run Raspberry Pi on our computers.