

EE/CprE/SE 491 WEEKLY REPORT 08 03/26/2018 – 04/01/2018

Group number: 18

Project title: Deep Learning with Radar for Object Recognition and Tracking

Client &/Advisor: Michael Olson (Danfoss) and Dr. Wang

Team Members/Role:

Tucker Creger - Project Manager

Eric Bishop - Software Developer

Kellen O'Connor - Deep Learning Architect

Clayton White - Hardware Design Engineer

Mitch Hagar - Radar System Lead

Nihaal Sitaraman - Hardware Developer

o Weekly Summary

This week we started work on our action items from the previous week.

We created a more comprehensive block diagram detailing out things that we will need to buy and connect the various parts of our system. This also showed how our system will work as a whole when connected. We also started to better research cameras to figure out the best camera to purchase.

o Past week accomplishments

- Kellen got the Jetson working with SSH and X11, which allows the group to continue development with it while the display issue is sorted out.
- Team created better block diagram as a whole.

o Pending issues

The major pending issues are designing a wiring harness and ordering the necessary parts and tools. Additionally, fixing the Jetson's Display is a major pending issue. We will be meeting with either Dr. Zambreno or Dr. Jones to try and get the display working.

We also need to find and purchase a camera that will work with our system.

o Individual contributions

Name	Accomplishments	Hours This Week	Hours Cumulative
Tucker Creger	I worked with Kellen, Nihaal, and Eric to get the Jetson TX2 working. I also set up a trip to the Danfoss test track to gain a better	9	85

	understanding of the facilities for our full vehicle testing in the fall.		
Eric Bishop	Made a more comprehensive block diagram that had every part of our system and how each part interacted with the other parts. Started to piece together our system, and look into setting up the RADAR with the Jetson TX2.	6	52
Kellen O'Connor	I got the Jetson working with SSH and X11, so we can now use it without needing a router. It connects directly to a user's laptop, which it uses as a display. Not quite an ideal solution yet, but it's a starting point that will allow us to continue development with the Jetson while we look into the display issue. This will be my next step.	8	62.5
Clayton White	Began research into PCB design platforms that would best suit our RADAR system. Starting looking into possible layout formations that our final design could follow.	6	46
Mitch Hagar	I gained an understanding of how all of our equipment	6	54

	will be wired. I then made a wiring diagram/wiring harness on microsoft draw.		
Nihaal Sitaraman	Worked on getting Jetson TX2 working with Tucker, Kellen, and Eric. Started the comprehensive system block diagram and passed it onto the team to make edits. Researched compatible cameras and provided Mitch with data so he could create a distilled table of a handful of choices.	6	64

o Plan for coming week

This week we will continue progress on our action items. Kellen will continue working on the Jetson TX2. Tucker will continue working on a wiring harness. Mitch will continue working on a system block diagram. Nihaal will be working on a camera solution. Clayton will continue working on a PCB design. Eric will be looking into deep learning models and working on our Gantt Chart.

o Summary of weekly advisor meeting

We did not meet with our advisor this week.