

EE/CprE/SE 491 Weekly Report 8

Group: sddec19-14

Client & Advisor: Danfoss Power Solutions(Radek) / Dr. Alexzander

Team Members:

Omar Abbas - meeting scribe/report manager

Dennis Xu - chief engineer/meeting facilitator

Aaron Michael - chief architect

Jonah Bartz - continuous integration

User Information Augmentation

4/12 - 4/19

Weekly Summary:

During the last week we looked into what kind of projection system we want and tried to get tensorflow installed on the Jetson TX2. When we tried to install tensorflow onto the jetson we ran into some dependency issues regarding cuda. It would seem that we didn't install the cuda application when we initially flashed it so we decided to reflash the drive.

We also discovered that the Intel Quark is not meant to run an OS, and that was our alternative plan to connect the tobii to the Jetson. As a consequence, we may have to change to the Intel compute stick to accomplish our purpose.

Past Week accomplishments:

Omar Abbas:

- Installed Tensorflow on personal computer and got familiar with it
- Attempted to install Tensorflow on Jetson TX2
- Met to discuss project plan proposal and Senior Design presentation

Dennis Xu:

- Researched types of projector films that could be used on the windshield
- Reflashed the Jetson TX2 to have cuda enabled for Tensorflow

Aaron Michael:

- Set up Ubuntu on my computer to allow for development away from the Jetson TX2.

Jonah Bartz:

- Downloaded virtual box on my computer as well.
- Started editing the project plan version 2
- Researched additional carrying boards for attaching cameras to the jetson

Pending issues:

- Learning OpenCV library which will allow us to perform image detection using the TX2.
- Use OpenCV to detect objects in front of the TX2, and use Tobii Eye tracker to determine whether the person saw the object or not.
- Waiting for projector to be delivered

Individual contributions:

Name	Individual Contribution	Hours since the last report	Hours Cumulative
Omar Abbas	Tensorflow Training OpenCV training Presentation discussion	4	32
Jonah Bartz	Researched carrying boards for jetson and sony 2 megapixel camera for lowlight	3	32
Dennix Xu	Researched projector films and reflashed Jetson TX2.	4	36
Aaron Michael	Set up Ubuntu on my computer.	2	28

Plans for upcoming week:

Get Tensorflow fully installed and ready to go, finalize projection means for the output of our system and simulate the process with one of our laptops running in the stead of the intermediary device (The quark or compute stick in our case). This will allow us to perform a rough simulation of what we hope to achieve in the long run and practice it for our demonstration in front of the EcPE panel on the day of our presentation!