EE 491 WEEKLY REPORT   **Date: 3/08/2017**

Group number: DEC1710

Project title: Autonomous Vehicle Processor

Client: Josh Betram / Rockwell Collins

Advisor: Zambreno/Jones

Team Members/Role:

Alex Orman - Team Leader

Chris Kelley - webmaster

Evan Lambert - Team Key Concept Holder

Lixing Liu - Team Key Concept Holder

Sean Jellison - Communication Leader

Lucas Ince - Scribe

o **Weekly Summary**

During this past week we met with our advisors and prepared for a meeting with the client. We created and finished up our project proposal and slideshow for process design. Created Design structure, from which we have action items to research alternatives to our choices. Came up with ways to gather training data. Identified a couple of camera options. From here we need to build our network and begin training it in addition to starting to work with the boards.

o **Individual contributions**

NAME	Individual Contributions
Alex Orman	Normal weekly paperwork, attended meeting. Requested HPC access, investigated using GPU acceleration for
Lixing Liu	Doing weekly presentation, search the camera for TK1 and how to use with opencv and document See3Cam in tk1.
Chris Kelley	Working on weekly documentation. Researched into computer vision for alternatives to machine learning. Updated website.
Sean Jellison	Research alternative methods for computer vision attend team, adviser, and client meeting
Evan Lambert	Researched different neural networks, created an example neural network for digit classification with tensorflow, worked on understanding tensorflow by creating a mini tensorflow, attended meetings
Lucas Ince	Finalized image generator, attended meetings.

o **Plan for coming week**

·   Alex Orman: finish up design document, then start implementing document. Investigate CNN vs RNN vs CV usage. Find research regarding comparisons. If possible, implement some kind of classical CV.

- Lixing Liu: Work on design document, continue on machine learning, and search more about see3cam.
- Chris Kelley: Start implementation, get the parts working together, and research how to get desired results from an image (distance of an object, orientation, etc.). Work with Sean.
- Sean Jellison: Start implementation, get the parts working together, and research how to get desired results from an image (distance of an object, orientation, etc.)
- Evan Lambert: Work on design document, read up on computer vision vs. machine learning, work on getting my own GPU to work with tensorflow.
- Lucas Ince: Improve speed of image generator.