

**CPRE 491**

**Team 45**

**Project Title: Prototyping and Testing Embedded Machine Learning in an Application**

**Date: 10-03-2021**

### **Weekly Report #3**

#### **Members: (With team roles)**

- Amy Wieland: Project Manager
- Tyler Ingebrand: Project Manager & Machine Learning Manager
- Nathan Bruck: External Hardware/Arduino Manager
- Yi Ting Liew: Task Board Manager
- Sean McFadden: Machine Learning Manager
- Nayra Lujano: Research Manager
- Chris Hazelton: Security Manager

#### **What we've accomplish in the past week / what we've been researching:**

- Amy: Contributed to the design assignments as well as researched how machine learning is currently being integrated into undergraduate courses
- Tyler: Obtained a VM from the ECG and began experimenting with the Python environment
- Nathan: Work through the embedded ML course. Researched the robot platform technicals.
- Yi Ting: Finish lightning talk audio and presentation slides, works on design document, and getting more understanding with ML as well as how the robot works in this project.
- Sean: Experimented with using OpenAI Gym and tried to optimize a sample model for faster training.
- Nayra: Worked with getting used to the tools in OpenAI Gym and continued to learn about machine learning techniques and how to implement them into our testing environment.
- Chris: Helped out with the design assignments and checked out openAI GYM

#### **What we are planning to do in the coming week (short 1-2 sentences on what you will be doing):**

- Amy: Will try to look into more of the coursera courses provided by Dr. Rover as well as contribute to the Testing assignments
- Tyler: Continue experimenting with Python and try to get MuJoCo running
- Nathan: Continue with the embedded ML course. Review some c++ fundamentals.
- Yi Ting: Proceed by working on Testing assignments and slides; watch the recorded workshop by Imagine 2021
- Sean: Investigate how to use Tensorflow on a GPU to try and train on the HPC.
- Nayra: This upcoming week I am going to attend the ARM dev summit's machine learning sessions. I will also continue to work on OpenAI Gym and Tensorflow.
- Chris: Will do my best to look into the required coursera courses and look more into OpenAI GYM than I did last week

**Issues or concerns we had in the previous week (will be brought up in a meeting for a full conversation):**

- Amy: No issues.
- Tyler: None
- Nathan: None
- Yi Ting: None
- Sean: None
- Nayra: None
- Chris: None.