CAE Research Project Meeting Minutes
2-15-2023

- Participants
  - Dr. Farag (PI)
  - Dr. Wu
  - Dr. Ezekiel
  - Drew Rado
  - Zach Keyser
  - Emily Himes
  - Zaryn Good
- Meeting started at 11:10 AM
- Unanimously approved minutes for meeting on Feb 8, 2023.

Main Points:

- **Progress report**
  - Drew made progress with cleaning 305, continued working on his paper, and is researching updating OptiPlexes to more mainstream devices
    - Currently looking for related works to include in paper
  - Sky and Drew created conn plots for benign and malicious data
  - Maria sent results as Excel file to Teams
  - Zaryn met with Maria to work on paper, and is running dataset through DCNNs
  - Zach has continued working on sensor diagrams for the testbed and has helped Hector with his Excel sheet of journals
  - Hector has been working on his Excel sheet and has helped Zach with his diagrams
  - Dr. Wu discussed getting results into the paper with Maria
  - Emily has continued with documentation and will continue to get results and graphics from other team members
- **Discussion points**
  - Drew and Sky will be investigating the sensors' code
    - Previously, the issue was that one sensor stopped after a few days, but it was discovered that eventually all sensors stop after a about a week of data collection
  - Maria found that SVM results were hardly changing between different testing/training splits
    - Dr. Ezekiel suggests that if the results are not changing that something is wrong, and that they should be run at a 50/50 split to see if the pattern continues
  - Zaryn would like to return to AlexNet and ResNet
    - ResNet is performing worse than expected at around 70% and AlexNet is running much better than expected at around 90%
    - VGG-16, VGG-19, and GoogLeNet are running as expected
    - MATLAB can allow multiple GPUs for better performance--this can be looked into
  - Zach demonstrated his diagram for one of the sensors, Drew confirmed that it reflects what's in the testbed

- **Tasks:**
  - Drew: continue work in 305 and with paper, explain layout of 305 to Zach and Emily for diagramming, and come up with budget for replacing OptiPlexes
  - Drew and Sky: continue investigating code, visualization, paper
  - Zaryn: continue investigating those two DCNN architectures and help Maria with paper as needed
  - Maria: continue work on writeup
  - Emily: continue work on documentation and take picture of 305 set up for doc

- o Zach: continue work with diagrams, upload diagrams to OneDrive, help Hector with Excel
- o Hector: continue work with Journal Excel workbook
- o Zach and Emily: create diagram of 305 for documentation based on Drew's explanation

Adjournment at 12:00. Next meeting will be held on Thursday, Feb 22nd at 11:10 AM