CAE Research Project Meeting Minutes
10-28-2022

- Participants
  - Dr. Waleed Farag (PI)
  - Dr. Xin-Wen Wu
  - Dr. Ramson
  - Drew Rado
  - Emily Himes
  - Meghan Schlipp
  - Sky Semone
  - Zach Keyser
  - Zaryn Good
- Meeting started at 6:00 pm
- Unanimously approved minutes for meeting on October 21th, 2022

Main Points:

- **Progress report**
  - Drew started exploring Zeek instead of WireShark to make data collection.
    - We are looking into this to get a more accurate dataset
  - Zaryn made progress on his paper and will meet with Meghan next week, they shared reading materials.
  - Nate finished up working with Titan: solved many of the problems. Planned on a full upgrade during winter break while people are using it.
    - Keep Dr. Ezekiel updated while making changes to his computer.
  - Sky worked on isolating issues with data acquisition with gas sensors
    - Increased mean run time from a few hours to over a day.
    - Jino gave advice on checking loops and other structures that could be causing issues.
  - Emily has spent time on organizing the OneDrive and reviewing the content.
  - Meghan looked at the SVM and XGBoost code.
  - Zachary started with learning linux so he can use Titan
  - Hector and Zach will be working with Sky and Drew to get more tasks for the future.

- **Discussion points**
  - Using Zeek like they did for the IoT-23 data
    - Right now there is issues with the install.
    - Once installed, replicate the data required.
    - Dr. Ramson mentioned how TCP works, and that we should take a better look at how the Arduino data transmission corresponds to the WireShark data.
      - Possibly work on decryption
      - After capturing the data, makes sure the data makes sense.
  - Injection of attacks
  - Contact Dr. Ezekiel if you have issues. Try to utilize collaboration as we are a big team.
    - Contact professors when you have an issue.
  - Jino and Dr. Ezekiel asked about the status of data collection
    - We have been collecting data with the sensors
    - Drew showed network data: 200,000 packets from 1 device.

- **Tasks:**
  - Maria and Zaryn
    - Once data comes in, verify it, preprocess it if it will work, and start applying algorithms
    - Show Meghan relevant scripts on Titan, and how the machine learning things work.
  - Drew, Nate, Sky, Emily, Meghan, Hector, Zach
    - Utilize Zeek and Wireshark for data acquisition
    - Report all interim problems to team leads so we can resolve outstanding issues.
    - Update the current data collection file and give it to Maria for testing.
  - Emily: research anomalous data, and the IoT datasets.

Adjournment at 6:55
Next meeting will be held on Friday, November 5th at 6:00 pm