CAE Research Project Meeting Minutes

Thursday January 6, 2022

- Participants
  - o Dr. Waleed Farag (PI)
  - o Dr. Soundararajan Ezekiel (Co-PI)
  - o Zaryn Good
  - o Franklin May
  - o Ryan Gess
  - o Alicia Deak
- Meeting started at 11:00am.
- Unanimously approved minutes for meeting on December 23, 2021
- Main Points
  - o Discussed:
    - ▪ ALL
      - Titan freezing up when accessing through team viewer
        - o Dr. Ezekiel will ask Nate to fix
      - Wrapping up the data collection and analysis part of the project (one week)
      - Complete write-up using traditional IEEE methods 6-7 pages (one week)
    - ▪ Maria
      - Need to remove the NaN values to run through SVM
      - Met with alicia to get caught up on previous tasks
    - ▪ Alicia
      - Copy codes from titan to removeable drive
      - Use the temp files from IoT23 and create a smaller distribution for the DCNN
    - ▪ Zaryn
      - Run the smaller subset of the IoT23 dataset.
    - ▪ Franklin
      - Work with Zaryn on the DCNN report.
      - Alicia, Zaryn, Franklin will meet to discuss DCNN and the code
      - Update the report on the one drive, put abstract on one-drive
    - ▪ Ryan
      - Compare the datasets through various SVM kernels and in a file.
      - See Franklins for an example.
  - o Tasks:
    - ▪ ALL
      - Make sure everyone has access to NJ computer
        - o See maria for access codes
        - o See franklin for the process
      - Post codes in pdf on the one-drive, organize one-drive
      - All data collection should be completed by the next meeting

- Two papers discussed:
  - Comparison study of IoT anomaly detection for XGBoost versus traditional methods of SVM
  - DCNN as a viable method for anomaly detection of IoT devices
- Compare balanced accuracy against traditional accuracy for samples of the weighted and unweighted data
  - Maria
    - Run through different SVM kernels, documenting metrics including cpu time, using .025, .05, .075 percent of the data
    - Organize OneDrive folder to contain any links (in a wordpad) of sites referenced. If possible include the papers referenced
  - Alicia
    - Copy codes from titan to removeable drive
    - Use the temp files from IoT23 and create a smaller distribution for the DCNN
  - Zaryn & Franklin
    - Meet to discuss process for the DCNN
    - Complete the abstract, update on the one-drive
    -
  - Ryan
    - Compare the datasets through various SVM kernels and in a file.
    - See Franklins for an example.
- Adjournment at 11:50am.
- Next meeting will be held on Thursday January 13, 2022, 11:00am.