CAE Research Project Meeting Minutes

2/25/2021

- Participants
    - Dr. Waleed Farag (PI)
    - Dr. Soundararajan Ezekiel (Co-PI)
    - Dr. Xin-Wen Wu (Co-PI)
    - Ethan Buhl
    - Cassandra Lefever
    - Alex Robbins
- Meeting starts at 4:00 p.m.
- Unanimously approved minutes for meeting on February 18, 2021
- Main Points
    - Updates:
        - Alex –
            - Datasets – cleaned normal data, attack data is in the process of being cleaned
            - Autoencoder Script – copied the script into new file and removed excess, getting an error when trying to run it
        - Ethan –
            - RANSACs – found documentation on RANSAC and some frameworks for us to use in the future, found Python libraries on GitHub
        - Cassie –
            - Peak Finding Algorithms, worked with Dr. Ezekiel to discuss this and a wavelet program we have to work with
    - Tasks:
        - Alex –
            - Work on parallel processing with the GPUs in MATLAB to speed up the data cleaning process
            - Work with Adam and/or Jackson to troubleshoot the autoencoder
            - Send finalized SPIE paper to Dr. Farag, Dr. Wu, and Dr. Ezekiel for final approval and submission
        - Ethan –
            - Continue to explore RANSAC – start running some of the libraries that were found on RANSAC to get some initial results; compare them, keep track of datasets used, data sizes, values, results in tables
            - Start developing a means to compare RANSAC to the other algorithms
            - Dr. Wu will share a document with explanations of some algorithms to help out
        - Cassie –
            - Continue to work on peak finding and the wavelets program
- Adjournment at 4:55 p.m.
- Next meeting will be held on Thursday, March 4, 2021 at 4:30 p.m. via Dr. Farag Zoom room.