CAE Re se arch P roj ect Mee ting Minutes

10/ 7/20 21 x Participants o Dr. Waleed Farag (PI) o Dr. Soundararajan Ezekiel (Co-PI) o Dr. Xinwen Wu o Maria Balega o Zaryn Good o Franklin May o Cassie Lefever o Alicia Deak o Eliot Hocke o Ryan Gress x Meeting started at 4:00 p.m. x Unanimously approved minutes for meeting on September 30, 2021 x Main Points o Discussed: ▪ Maria & Cassie x Got access to TCNJ machine and Redhawk machine at IUP x Ran through the five IoT23 files in XGBoost, all had 9 classifications

exc ept one, ac hiev ed up t o 99% acc urac y, dat a dist ribution is uneven ▪ Alicia & Eliot x Ran the dat file through XGBoost to see if it would run better than csv,

get t ing st uc k in an endless loop x Can create synthetic data to accommodate nan values in datasets ▪ Zaryn x Running DCNN, training is taking a while ▪ Franklin x Running KDD dataset in SVM, getting an endless loop x Added histogram in XGBoost algorithm ▪ Ryan x Ran TON-IoT in XGBoost using binary classification, 14% anomalous in

eac h c apture, achiev ed up t o 98% ac c urac y , max_dept h was 10 0 so it

may be overfitting data o Tasks: ▪ Maria & Cassie x Run the five IoT23 files in SVM to compare results x Look into published papers for comparing results ▪ Alicia & Eliot x Continue to run dat files through XGBoost and solve endless loop error x Find and run a balanced dataset in XGBoost to see results ▪ Zaryn

x Continue working on DCNN with IoT23 dataset, start working on
converting TON-IoT dataset to images
▪ Franklin
x Run a program in titan and TCNJ machine and compare CPU time
x Continue working with SVM trying to solve endless loop
▪ Ryan
x Continue running the TON-IoT captures in XGBoost, try to stay below 10
on max_depth
o General tasks:
▪ Work on abstracts and continue revising them
x Franklin is working on DCNN abstract
x Maria is working on XGBoost abstract
x Adjournment at 5:10 p.m.
x Next meeting will be held on Thursday October 14 at 3:00 p.m. Via Dr.Farag’s Zoom Room