NORTHWEST INSTITUTE FOR CYBERSECURITY EDUCATION AND RESEARCH

CySER Virtual Seminar

Assefaw Gebremedhin
CySER Overview and Machine Learning
October 11, 2021
3:10 – 4PM PDT

Team Link: Click here to join the meeting
Or call in (audio only) +1 509-498-6399,,29343494#
Phone Conference ID: 293 434 94#

Abstract:

Supported by the VICEROY initiative of the Department of Defense, the CySER Institute is established to train the next generation of military and national defense-aligned civilian workforce in cybersecurity, organically merging theoretical knowledge with experiential learning. This presentation will begin with an overview of the CySER program and its objectives and will then delve into several research topics at the intersection of machine learning and cybersecurity. We will specifically discuss ongoing research efforts on the application of Generative Adversarial Networks (GANs) to Intrusion Detection Systems (IDS). Modern IDSs rely on machine learning, however training them is difficult due to poor quality and availability of attack data. GANs can offer a solution to this dilemma. We will survey the state-of-the-art in the use of GANs to improvement of IDSs and outline our own approaches.

Bio:

Assefaw Gebremedhin is an associate professor in the School of Electrical Engineering and Computer Science at Washington State University, where he leads the Scalable Algorithms for Data Science Lab. He is a recipient of the 2021 George Polya Prize in Applied Combinatorics, and of the NSF CAREER Award in 2016. He serves as a Co-PI and Research Lead of the CySER Institute.

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