16 September 2021

Automated Software Vulnerability Detection with Deep Learning based Nature Language Processing (1:00 – 1:50 pm EST)

An Introduction to Jump-Oriented Programming: An Alternative Code-Reuse Attack (2:00 – 2:50 pm EST)

Mark your calendars and come join your friends in the CAE community for a Tech Talk. CAE Tech Talks are free and conducted live in real-time over the Internet so no travel is required. Capitol Technology University (CTU) hosts the presentations using Zoom which employs slides, VOIP, and chat for live interaction. Just log in as "Guest" and enjoy the presentation(s).

Below is a description of the presentations and logistics of attendance:

PRESENTATION #1

Topic: Automated Software Vulnerability Detection with Deep Learning based Nature Language Processing

Time: 1:00pm – 1:50 pm EST

Location: https://captechu.zoom.us/j/664120328

Just log in as "Guest" and enter your name. No password required.

Presenter(s): Shaoen Wu, State Farm Endowed Chair Professor, Illinois State University and Noah Ziem, Research Scientist, Illinois State University

Description: In this talk, we will briefly review the literature of using machine and deep learning for software vulnerability detection. Then we will present our recent research progress and outcomes of using deep learning based nature language processing to detect software vulnerabilities.

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PRESENTATION #2

Topic: An Introduction to Jump-Oriented Programming: An Alternative Code-Reuse Attack

Time: 2:00pm – 2:50 pm EST

Location: https://captechu.zoom.us/j/664120328

Just log in as "Guest" and enter your name. No password required.

Presenter(s): Bramwell Brizendine, Dakota State University

Description: While return-oriented programming is a very well-known form of code-reuse attacks, widely used in low-level exploitation, jump-oriented programming (JOP) has been seldom discussed and rarely used. We will introduce the topic of JOP. We will show we can leverage the JOP ROCKET to discover JOP gadgets and create a JOP exploit script.

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