

DeapSECURE

Computational Training for Cybersecurity

DeapSECURE is a training program to infuse high-performance computational techniques into cybersecurity research and education. DeapSECURE aims to train current and future cybersecurity researchers, engineers and practitioners in the area of advanced computational techniques and data analytic skills, provide exposure to the application of these technologies in the state-of-the-art cybersecurity research. Learners experience these techniques via hands-on activities to increase computational competency for their degree curricula and research projects, which are especially important for advanced degrees. This training is a project of the school of Cybersecurity at Old Dominion University (ODU), funded by the National Science Foundation.

DeapSECURE Training Modules and Topics:

1. Dealing with Big Data

- (1) Tackling cybersecurity challenges with big data analytics;
- (2) Using Pandas to process and analyze big data;
- (3) Data cleaning and preparation;
- (4) Visualization.

2. Machine Learning

- (1) Uses of machine learning (ML) in cybersecurity;
- (2) Fundamental concepts in ML;
- (3) Scikit-learn Python library;
- (4) Data preprocessing for ML;
- (5) Building, training, and validating ML models;
- (6) Feature selection;
- (7) Optimizing ML models.



Requirements

Pre-requisites:

Basic programming skill in Python or C++ or similar languages is required to gain the most benefit from our training. Knowledge of UNIX shell commands is recommended.



Attend Our Fall Virtual Workshop!

The DeapSECURE team is excited to invite students from community colleges and universities across the Commonwealth of Virginia to participate in our online state-wide training.

Workshop Time and Date:
19-Nov-2021, 1 p.m. to 5 p.m.

Workshop format:

Our training is conducted online via Zoom. This workshop is for students with interests and/or concentration in cybersecurity. Our workshop includes brief lectures and hands-on introduction of the technical topics. Learners are guided through an extensive set of hands-on activities in breakout groups.



To sign-up please visit:

<https://deapsecure.gitlab.io/sign-up>

Or scan the QR code
with any device

