Dave Friedman

Aspiring computer security engineer seeking an entry-level cyber | data | devsecops | linux | network engineering role, mentorship, and building relationships

Experience

2U, Lanham, MD (Remote)
parent company of edX

SENIOR INSTRUCTIONAL SPECIALIST
Oct 2021 - Aug 2024

- Provided expertise in computer security, artificial intelligence, and data and financial analytics and visualization tools and technologies to students
- Provided Tier-2 technical support, along with troubleshooting and configuration assistance for computer- and software-related issues
- Delivered training sessions to instructional specialists, and facilitated the coordination of day-to-day operations in conjunction with leadership
- Performed quality assurance checks in cooperation with curriculum engineering and development
- Achieved a comprehensive student engagement score of 5.0/5 from 1 out of 2 students based on more than 2000 instructional sessions (written feedback on LinkedIn)

CYBER SECURITY INSTRUCTIONAL SPECIALIST
Jul 2021 - Oct 2021

CYBER SECURITY TEACHING ASSISTANT
May 2020 - Jul 2021

- Cyber Security Teaching Assistant at University of Pennsylvania's College of Liberal and Professional Studies
- Assisted students with understanding cybersecurity and financial technologies concepts, tools, and techniques
- Provided guidance and support in troubleshooting technical issues during lab sessions
- Collaborated with instructors to develop curriculum materials and update course content
- Evaluated student assignments and final projects

Penn State University, State College, PA

ENTERPRISE SECURITY STUDENT WORKER *Office of Information Security*
Jan 2020 - Mar 2020

- Performed log analysis of university systems via Splunk SIEM

TUTOR IN MATHEMATICS AND SPANISH *Morgan Academic Center for Student-Athletes*
2019 - 2020

- Tutored Penn State student-athletes in Spanish language and linguistics; Euclidean trigonometry; symbolic algebra; analytical geometry; and the calculus

Project Work

Homelab

- Designed, installed, configure, and manage a rack-mounted enterprise network stack, including a security gateway with stateful firewall, L7 traffic filtering, and multigigabit IDPS routing; a security camera system with local NVR; and a managed PoE switch.
- Planned, procured equipment for, installed, and terminated tens of shielded Cat 6a runs to multiple wireless APs and other networked devices powered over ethernet using best practices.
- Configure and manage VLANs for secure devices, Wireguard VPN clients, and IoT networks with least-privilege access, and a raspberry pi (single-board computer) cluster incorporating a suite of networked services including OpenSSH remote authentication, DNS filtering, a distributed deployment of HDFS and Apache Spark for big-data processing, and load-balanced web services (image featured on LinkedIn banner). - https://github.com/heracliteanflux/pi_cluster

Laptop Lab

- Build and maintain a knowledge base of topics in applied mathematics and computing using a suite of programmatic and typesetting tools and technologies, including Jupyter Book and LaTeX.
- Remote shell vulnerabilities and web exploits from OverTheWire CTF (capture-the-flag) — https://heracliteanflux.github.io/laptoplab/c/sec/ctf/otw/index.html
- Detailed workthrough of Troncone & Albing's book *Cybersecurity Ops with bash* - https://heracliteanflux.github.io/laptoplab/c/shell/bash/book_cybersecurity_ops_with_bash.html
- Detailed workthrough of Albing & Vossen's book *Bash Idioms* - https://heracliteanflux.github.io/laptoplab/c/shell/bash/book_bash_idioms.html
- Many more pages including those based on Penn State coursework.

Contact

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LINKEDIN

github.com/heracliteanflux
GITHUB

heracliteanflux.github.io/laptoplab
GITHUB PAGES

Skills

Technical

- Ansible network automation and configuration
- Apache Spark big-data programming
- Applied mathematics
- Amazon Web Services cloud management
- Anaconda package and environment management
- Bash shell scripting and configuration
- C programming
- Computer networks
- Data analytics and visualization
- Git version control
- Linux/Unix administration and hardening
- Mathematical typesetting
- OpenSSH authentication and remote server management
- PostgreSQL relational database management
- Python development
- R programming
- SQL
- Systems administration and programming
- Technical documentation
- Web development
- Zsh shell scripting and configuration

Soft

- Analysis
- Critical thinking
- Detail oriented-ness
- Organization
- Research

Language

- Japanese
- Linguistics
- Spanish

Education

The Pennsylvania State University
Philosophy of Math and Science
Dec 2026

Minor - Computer Science
Minor - Mathematics for IST
Minor - Linguistics
Minor - Spanish

- CYBER 497 Machine Learning Security
- CYBER 497 Blockchain
- CYBER 362 Cybersecurity Analytics Studio
- CYBER 262 Cyber-Defense Studio
- CYBER 100 Computer Systems Literacy
- CMPSC 497 Cryptography
- CMPSC 465 Algorithms and Data Structures
- CMPSC 410 Programming Models for Big Data - https://github.com/heracliteanflux/exercises-scala
- CMPSC 360 Discrete Mathematics for Computer Science
- CMPSC 311 Systems Programming - https://github.com/heracliteanflux/systems
- CMPSC 221 Object-Oriented Programming with Web-Based Applications - https://github.com/heracliteanflux/object-oriented-programming-with-web-based-applications
- CMPSC 132 Programming and Computation II: Data Structures
- CMPSC 131 Programming and Computation I: Fundamentals
- CMPEN 270 Digital Design: Theory and Practice
- DS 220 Data Management for Data Sciences
- IST 451 Networking Security
- IST 220 Networking and Telecommunications
- IST 210 Organization of Data
- MATH 484 Linear Programming - https://heracliteanflux.github.io/laptoplab/m/linearprogramming/index.html
- MATH 468 Mathematical Coding
- MATH 457 Mathematical Logic
- MATH 220 Linear Algebra