

Work Experience

Software Development Intern

Infrastructure and FMX Exchange

Cantor Fitzgerald

New York, New York

June 2024 - Present

- Developed a program that dynamically generates over 150 real time network diagrams in under 60 minutes. Used python with multithreading and paramiko to retrieve the data. Jinja2 and JavaScript to generate the diagrams.
- Engineered a real time web application that provides a UI to manage the FMX futures exchange. Enabling operations teams to restart core services in seconds and proactively address outages that would otherwise go unnoticed. Leveraged python, flask, and web sockets on the backend, and TypeScript, HTML, and CSS on the frontend.
- Designed, coded, and deployed endpoint troubleshooting web app using python, HTML, CSS, JavaScript, and paramiko. Tool is used globally by our infrastructure teams, enabling anyone to troubleshoot network outages.

Cybersecurity Intern - Co Director

Web Development

CCT

Plattsburgh NY

Jan 2024 - May 2024

- Developed an internal organizational website to replace our prior "hand written" approach to documentation. Implemented features such as a change log, calendar, and documentation section. Used Flask, SQLite, JavaScript, HTML, and CSS.
- Configured DMZ network on a pfSense firewall to securely host external services for students such as web servers, honeypots, SSH servers, etc.
- Hosted bi-weekly technical workshops for students at SUNY Plattsburgh. Workshops consisted of hands on experience such as configuring virtual machines, password cracking, and open source firewall configurations.

Full Stack Web Developer

Freelance

Fiverr

Remote

Jan 2024 - June 2024

- Developed full stack custom web applications with flask, JavaScript, python, SQLite, and HTML / CSS.
- Met one on one with clients to translate their ideas into technical requirements. Continuously communicated them. throughout the development process ensuring client satisfaction and defining expectations. Retained a 5 star rating.

Information Technology Intern

Information Technology

Ballston Spa National Bank

Ballston Spa NY

May 2023 - Feb 2024

- Developed an interactive webpage of the roadmap for the IT department using Sharepoint and MS Project
- Configured and deployed UPS network cards so they could be managed and monitored using SNMP

Projects

Honeynet Distributed System

- Engineered an on site kubernetes cluster with kubeadm to host microservices and implemented monitoring services such as prometheus, ELK Stack, and grafana. Implemented metallb load balancer and calico network policies.
- Configured custom TCP Dump and Socat TCP socket server. Coded TCP socket client in python to connect to the pod for real time packet monitoring.
- Elected as a speaker to present at the **6th Annual North Country Cybersecurity Conference** discussing the architecture of a honeynet and how it provides value to your business.

Technologies and Languages

- **Languages:** Python, JavaScript, HTML, CSS, Java, SQL
- **Technologies:** SQLite, Postgres, AWS, Docker, Kubernetes, Bash, Linux, Flask, Node JS, Git, ELK, TypeScript
- **Security Tools:** pfSense, Security Onion, Scapy, TCPDump, Wireshark, Kali, Socat

Education

- **BSc:** Management Information Systems | **Minor:** Computer Science

Expected May 2025