

Work Experience

Software Development Intern Infrastructure and FMX Exchange	Cantor Fitzgerald New York, New York	June 2024 - Present
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- Developed a program that generates up-to-date network diagrams for over 200 offices using JavaScript, Jinja2, HTML Canvas, and Python.
- Leveraged web sockets to develop a real time web UI to manage the platform for FMX futures exchange. Enabled users to manage the entire application platform. Emphasizing UX best practices. Responsible for frontend and backend. Built REST API clients to retrieve and structure data to be sent to frontend.
- Designed, coded, and deployed endpoint troubleshooting web app using python, HTML, CSS, JavaScript, and paramiko. Tool used globally by our infrastructure teams, providing a significant reduction in troubleshooting time.

Cybersecurity Intern - Co Director Web Development	CCT Plattsburgh NY	Jan 2024 - May 2024
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- Coded internal organizational full stack website for the center for cybersecurity and technology using flask, HTML, CSS, JavaScript and SQLite.
- Implemented a TCP Dump packet sniffer in an on-site Kubernetes cluster. Performed analysis using python's scapy library on incoming and outgoing packets within the DMZ.
- Configured and administrated two ubuntu linux servers to host hands-on technical workshops for over 30 students.

Full Stack Web Developer Freelance	Fiverr Remote	Jan 2024 - June 2024
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- Developed full-stack web applications for clients using Flask, Python, HTML, CSS, JavaScript, and SQLite.
- Collaborated with clients to gather requirements and ensure project alignment with their needs, managing projects from inception to deployment.

Information Technology Intern Information Technology	Ballston Spa National Bank Ballston Spa NY	May 2023 - Feb 2024
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- Developed 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
- **Security Tools:** pfSense, Security Onion, Scapy, TCPDump, Wireshark, Kali, Socat

Education

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| • BSc: Management Information Systems Minor: Computer Science | Expected May 2025 |
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