

Work Experience

Software Developer Internship	Cantor Fitzgerald New York, New York	June 2024 - Present
<ul style="list-style-type: none">Developed a real-time WebSocket-enabled web app for FMX futures exchange, enhancing operations team efficiency and reducing outage response times. Created custom Prometheus queries to display real-time metrics.Implemented a role-based access control (RBAC) matrix in the above web application, utilizing Kubernetes custom resource definitions to enable custom role creation for administrators, enhancing application security.Developed a Python program with multithreading and Paramiko to generate 150+ real-time network diagrams within 60 minutes, improving operational efficiency by 75%.Created a switch port troubleshooting tool with an intuitive GUI to decrease network issue resolution time by 50%. (TypeScript, HTML/CSS, Python, Paramiko, Flask, Git)		
Software Developer Internship	Plattsburgh State University Plattsburgh NY	Jan 2024 - May 2024
<ul style="list-style-type: none">Developed a containerized full-stack internal organizational website to modernize our approach to documentation. Implemented features such as a change log, calendar, and documentation section. (Docker, Flask, React, Git)Configured DMZ network on a pfSense firewall to securely host external services for students such as web servers, honeypots, SSH servers, etc.Provisioned virtual machines to VMWare ESXi to host web services such as Apache2 and Nginx.Organized and led bi-weekly technical workshops for 20+ students on Docker, password cracking, and open-source firewall setups, and version control systems such as git.		
Information Technology Associate Internship	Ballston Spa National Bank Ballston Spa NY	May 2023 - Feb 2024
<ul style="list-style-type: none">Provided help desk support for 150+ enterprise applications, resolving 3-4 technical issues daily, contributing to enhanced internal systems functionality.Configured and deployed UPS network cards, enabling SNMP monitoring and ensuring uninterrupted service for critical IT infrastructure.		

Projects

Honeynet Distributed System

- Engineered a Kubernetes cluster with kubeadm to host microservices, implementing monitoring tools like Prometheus, Elasticsearch, Kibana, and Grafana.
- Developed custom TCP Dump and Socat TCP socket server for real-time packet monitoring, contributing to advanced security monitoring for the honeynet.
- 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.

Personal Website on AWS

- Deployed a personal portfolio website on AWS EC2, utilizing AWS S3 for storage and ensuring high availability and scalability. Implemented continuous deployment and integration via GitHub actions and Docker Compose.
- Configured nginx as a reverse proxy and Cloudflare for DNS to handle incoming traffic efficiently.

Technologies and Languages

- Languages:** Python, JavaScript, HTML, CSS, Java, SQL
- Technologies:** SQLite, Postgres, AWS (EC2, S3), Docker, Kubernetes, Bash, Linux, Flask, Node JS, Git, ELK, TypeScript
- Security Tools:** pfSense, Security Onion, Scapy, TCPDump, Wireshark, Kali, Socat, TCP/IP

Education: Plattsburgh State University

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