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Christian Bates
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Work Experience

Software Development Intern   **Cantor Fitzgerald**   **June 2024 - Present**
New York, New York

- 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 real-time websocket-enabled web app for FMX futures exchange, enabling operations teams to manage and view core services in seconds and diagnose outages. Deployed to production as of 1/21/25.
- Developed a switchport troubleshooting network tool used by infrastructure teams to diagnose network issues. It included a UX-friendly GUI to decrease troubleshooting time by 50%.

Software Development Intern   **Plattsburgh State University**   **Jan 2024 - May 2024**
Plattsburgh NY

- Developed a containerized full-stack internal organizational website to replace our prior "handwritten" approach to documentation. Implemented features such as a change log, calendar, and documentation section.
- Configured DMZ network on a pfSense firewall to securely host external services for students such as web servers, honeypots, SSH servers, etc.
- Organized and led bi-weekly technical workshops for 20+ students on topics including docker, password cracking, and open-source firewall setups.

Full Stack Web Developer   **Fiverr**   **Jan 2024 - June 2024**
Remote

- Developed custom full-stack web applications using Flask, JavaScript, Python, SQLite, and HTML/CSS, meeting client requirements and deadlines.
- Collaborated directly with clients to translate their needs into technical specifications, ensuring a 100% client satisfaction rate and maintaining a 5-star rating throughout the contract.

Information Technology Intern   **Ballston Spa National Bank**   **May 2023 - Feb 2024**
Ballston Spa NY

- 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 monitoring via SNMP, 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, ELK Stack, 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.

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: Plattsburgh State University

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