

Elliot Chin

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PROFESSIONAL SUMMARY

Software developer with experience across cybersecurity, OT/industrial networking, infrastructure management, full-stack application development, and applied AI research support. Skilled in building technical solutions for networked and industrial environments, maintaining virtualized lab infrastructure, troubleshooting Windows/Linux systems, and supporting research and development for cybersecurity use cases and products. Experienced with industrial communication systems, network segmentation, packet analysis, real-time web application development, and exploratory AI workflows for network/security analysis. Interested in roles that combine cybersecurity, networking, software development, AI-enabled tooling, and system architecture.

ENGINEERING / TECHNICAL EXPERIENCE

Junior Application Cybersecurity Specialist, Siemens, Canada | June 2023 - Current

- Lead for compatibility testing for SINEC Security Monitor across lab configurations, validating integration behavior, deployment scenarios, and product functionality in representative OT environments.
- Analyze industrial protocols including PROFINET, OPC UA, S7 communication, and IEC 104 using Wireshark, UAExpert.
- Develop Zeek packet-analysis plugins in C++ to inspect, parse, and log industrial/OT protocol traffic for cybersecurity monitoring and R&D use cases.
- Administer Proxmox-based virtualization infrastructure hosting R&D virtual machines, project infrastructure VMs, and remotely accessible jumpboxes.
- Maintain and manage an OT lab environment that simulates electric power substation and building automation networks using relays, IEDs, servers, switches, and rack-mounted industrial equipment.
- Configure and manage VLANs, network segmentation, switch connectivity, and lab infrastructure used for OT cybersecurity testing and development.
- Troubleshoot lab infrastructure across Linux, Windows, Proxmox, Cisco switching, Cisco and Fortinet firewall environments, and industrial network equipment.
- Developed custom analysis workflows to compare observed network traffic against expected protocol behavior, generated Zeek logs, and cybersecurity monitoring use cases.
- Built and debugged software tools and web applications using React, Next.js, Python, Flask, Docker, and Git, including SSM API integrations, internal team management tooling, and SSM protocol support work.

Software Developer, University of New Brunswick, Canada | May 2022 - Dec 2022

- Led the full-stack development team for the Department of Electrical and Computer Engineering.
- Gathered requirements from academic stakeholders for a department-wide automated tool supporting academic advising and CEAB accreditation workflows.
- Designed and implemented maintainable software solutions that could scale with advising, curriculum, and accreditation needs.
- Analyzed academic and accreditation-related data to identify improvement areas and support future development recommendations.
- Provided progress updates in remote and in-person meetings with key collaborators and stakeholders.

SELECTED PROJECTS

Industrial Protocol Analysis / Zeek Plugin Development | Canada

Zeek, C++, Wireshark, PLCs, OPC UA, Industrial Networking, SINEC Security Monitor

- Researched OPC UA protocol behavior within an R&D lab environment using PLCs, generated OPC UA traffic, Wireshark, and UAExpert to simulate and understand normal and abnormal industrial communication scenarios.
- Developed a Zeek-based protocol-analysis plugin for SINEC Security Monitor to inspect and parse OPC UA traffic and generate event-specific logs for selected cybersecurity monitoring use cases.
- Defined attack procedures and generated test-data scenarios to validate how the plugin detected and logged protocol events, communication behavior, certificate handling, access-level checks, and write-response conditions.

SPECIALIZED SKILLS

Programming / Web: JavaScript, React, Next.js, Python, Flask, REST APIs, HTML/CSS, Tailwind CSS, Material UI, HeroUI

Data / Backend: Redis, backend event handling, API design, real-time communication

Cybersecurity / Analysis: Wireshark, packet analysis, Windows Event Viewer, audit policy review, authentication/logon troubleshooting, OpenSSL

Industrial / OT: OPC UA, PROFINET, S7 communication, IEC 104, VLANs, trunk/access ports, SIEM/SCADA systems

Infrastructure / Tools: Docker, Linux, Windows, Proxmox, Nginx, Cisco switch troubleshooting, Fortinet firewall diagnostics, Git, PowerShell, Bash

Languages: Mandarin, English, Cantonese, Malay

EDUCATION

University of New Brunswick, Fredericton, NB, Canada

Bachelor of Science in Software Engineering, 2023

CEAB-accredited program