Isaac Latta

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SUMMARY

- Highly organized and efficient third-year Software Engineering student experienced in networking.
- Practical Up-to-date experience with C/C++, Python and Java
- Experience in debugging and testing complex network code.
- Great knowledge and interest in Linux, Networking concepts, OS fundamentals.
- Excpetion time management skills and ability to streamline existing workflows.
- Problem solver and efficient self learner, able to learn new things quickly in fast paced environments.

EDUCATION

Bachelor of Software Engineering   BC, Canada
Thompson Rivers University   *Sept. 2022 – Present*

Undergraduate Physics   BC, Canada
Thompson Rivers University   *Sept. 2018 – May. 2021*

Machine Learning Field School   Guadalajara, Mexico
University of Guadalajara   *April. 2024 – May 2024*

PROJECTS

CGI HTTP/HTTPS Web Server | *C, C++, Git, ASIO, OpenSSL, Wireshark*
- Created a custom HTTP/HTTPS server with role based JWT authentication, for secure session management.
- Optimized network throughput under heavy loads by leveraging coroutines and efficient I/O handling.
- Debugged and tested complex, highly concurrent network code with Wireshark and GDB.
- Validated protocol integrity using HTTP/HTTPS RFC standards.

Home/Cloud Server Administration | *Linux (Ubuntu Server), AWS, Clouflare, Nginx, Docker, Firewall, SQL Server*
- Configured various network and routing mechanisms, EDR solutions, SSL/TLS certificates.
- Monitored live network logs, identifying and improving newtork performance indicators.
- Configured containerized web services (My CGI-Web-Server, Nginx, cloudflare tunnel) and integrated with databases.
- Configured firewalls, traffic routing and EDR solutions for server hardening.

HTTPS Proxy Server | *C++, Git, ASIO, OpenSSL*
- Developed an event-driven proxy to securely intercept and forward HTTPS traffic.
- Resolved concurrency bottlenecks in multi-threaded networking environment.
- Ensured high performance by referencing SSL/TLS specs, ASIO documentation, and detailed system log analyses.
- Debugged complex, low level, real-time networking issues with GDB and Wireshark.

Smart Factory IoT System & Mobile App | *C++, Java, mbed, IoT, Mobile App Development*
- Developed an IoT system for monitoring and controlling factory operations using an mbed microcontroller.
- Designed and implemented a mobile app for real-time data visualization and notifications.
- Integrated sensor data collection, wireless communication, and cloud-based analytics.
- Improved operational efficiency through automation and predictive insights.

Cybersecurity Labs and CTFs | *C, C++, Python, bash, Kali Linux, Nmap, Nessus, Metasploit, Wireshark, msfvenom, Snort*
- Conducted penetration testing using tools and exploitation techniques via CTFs, HackTheBox and PwnCollege.
- Hands-on experience in exploiting and securing servers and networks.
- Created custom scripts for exploit development and network security assessment.

Technologies and Skills

Languages: C/C++, Python, Java, SQL, Go, Bash, Powershell
Server Admin:AWS (EC2, S3, RDS), Nginx, Cloudflare, Firewalls, EDR Solutions, VPN/Tunneling, routing
Development: Agile, Scrum, Git, Docker, Virtualization (VMWare, VirtualBox)
Systems:Linux (Ubuntu, Fedora, Kali), Windows, Mac OS
Cybersecurity: Kali, Nmap, Wireshark, Metasploit, Tcpdump, Gobuster, SQLmap, Netcat, msfvenom
Hardware/Embedded Systems: VHDL, IoT devices, Oscilloscopes, ICs, FreeRTOS, mbed

Work Experience

Brick Layer & Labourer
BC, Canada

Robinson Masonry
May 2019 – Sept. 2024

- Organized safety briefings and maintained adherence to safety regulations in unpredictable and high-risk settings.
- Streamlined and enhanced existing supply and safety procedures.
- Adapted rapidly to specialized tools and machinery (e.g., telehandler, zoom boom, power tools) with zero prior trades experience, boosting project efficiency by 15%.
- Led a diverse labor team on fast-paced construction projects, aligning daily objectives and safety standards to meet tight deadlines.
- Organized material deliveries, monitored onsite inventory levels and safety checks by leveraging strong communication skills.

Produce Clerk
BC, Canada

Real Canadian Superstore
July 2016 – Sept. 2019

- Integrated with teams across multiple departments to streamline product rotation and ensure quality, maintaining a customer-focused experience.
- Provided hands-on training to new hires, emphasizing strong communication and teamwork to boost productivity and morale.
- Handled inventory restocks and resolved supply discrepancies promptly, demonstrating problem-solving under tight deadlines.

References

Available Upon Request