Peter Bou-Farah

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Education

University of Ottawa   Sep 2022 — Dec 2026
*Honours Bachelor of Science in **Software Engineering***   *Ottawa, ON*

Technical Skills

Languages: Java, Python, Go, C, C++, JavaScript, Node.js, Lua, Bash, SQL, Assembly, HTML, CSS
Frameworks: React, Angular, Selenium, BS4, Pandas, Flask, Express, ZMQ, Django, Snort, TensorFlow, PyTorch, scikit-learn
Tools: Linux, Git, Docker, Jira, Jenkins, Android Studio, Jupyter, SVN, SQL, Firebase, MongoDB, AWS, Ghidra

Experience

Cybersecurity Vulnerability Researcher   May 2025 — August 2025
Trend Micro   *Toronto, ON*
- Developed PoC exploit code (SQL injection, RCE) using **Python** on **Kali Linux** and tools such as **Metasploit** and **Wireshark**; authored **Snort** rules to detect the exploits.
- Reverse-engineered enterprise software using **Ghidra** and **JD-GUI**, and authored a detailed technical report for **CVE-2025-37091**, providing root-cause analysis and remediation guidance.

Software QA Developer   Jan 2024 - Apr 2024
Government of Canada   *Ottawa, ON*
- Executed over **150+ test** cases for various different projects at the Government of Canada. Finding over **25+ bugs** and inputting them into a solid Jira ticketing upstream.
- Took charge of accessibility testing and created over **20 test cases** implemented into department test suites.

Embedded Software Developer   Sep 2024 - Dec 2024
Ross Video   *Nepean, ON*
- Added features to proprietary **C++** SDK for **15+ microservices**, working with ZeroMQ for interservice communication.
- Worked on **Go** backend interpreter layer for the Ross Video softGear Streaming Gateway (SSG).
- Implemented **CI/CD** pipeline (**Bash** + **Jenkins**) to automate build, test and deployment, reducing manual effort and ensuring consistent releases.

Software Developer   May 2023 - Aug 2023
Ross Video   *Nepean, ON*
- Developed a **Python ROBOT Framework** test suite to automate video validation, replacing reliance on **Phabrix** third-party tools and achieving cost savings of approximately **$25,000**.
- Conducted thorough loopback testing on the Master Controller device (MC1-UHD) to validate reliability.

Projects

Astra - Automated Trading System | *Python*
- Coded and an extensive secure **Python** application utilizing REST-API endpoints, JSON data structures, and databases to automate and optimize user trades for profit (over **$7,000 USD**) on a gaming platform.
- Developed a secure and automated whitelisting system to authenticate over **1,400,000 customer connections** via networking and security verifications.
- Built a customer base of over **600 buyers** as well as a community of over **1,450+ members**.

Leadership / Volunteering

uOttawa Cybersecurity Club   September 2023 — Present
Vice President
- Managed the organization and communication for Ottawa's largest student-run cybersecurity Capture The Flag (CTF) event, attracting over **400+ participants**.
- Orchestrated workshops, coding sessions, and events to enhance skills and encourage continuous learning.
- Managed and enhanced the club's digital presence amassing over **944 followers** across all platforms.
- Collaborated with relevant clubs and organizations to orchestrate events and initiatives, significantly boosting engagement among cybersecurity enthusiasts.