Matthew do Santos-Zounon

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Richmond Hill, ON

Experience

Software Integration Engineer Sep 2024 – Apr 2025
Rivian — Rivian and Volkswagen Group Technologies *Vancouver, BC*

- Led sub-team of 4 to ship mobile release v2.21, aligning PM, Design, & Devs through complete release cycle
- Developed automated UI and API tests using **Python's PyTest** and **Appium** integrated with **GitHub Actions** to run on simulated and test-bench vehicles
- Discovered bugs and developed tests for Android using **Android Studio SDK (Java & Kotlin)** and for iOS using **XCode (Swift)**
- Mentored junior interns teaching test processes, development skills, and automation fundamentals

Quality Assurance Engineer May 2023 – Dec 2023
Operto Guest Technologies *Vancouver, BC*

- Developed and deployed 200 E2E UI test case suite in **TypeScript** using **Playwright**, covering new features and 85% of the most common user flows identified through **FullStory**
- Enabled fast feature iteration by incorporating automated test suite into CI/CD pipeline
- Led cross-team bug triage aligning on severity and ownership, removing blockers for more efficient feature release

Software Systems Engineer May 2022 – Dec 2022
Gatekeeper Systems Inc. *Abbotsford, BC*

- Automated 150 manual test cases by reverse engineering **HTTPS** protocol from PCAPs (**Wireshark, tcpdump**) and developing a Python **scapy** tool to emulate device traffic, eliminating the need for physical hardware
- Performed static and dynamic firmware analysis on embedded **MIPS** Linux by extracting images with **binwalk**, analyzing with **radare2, Ghidra**, and demonstrated PoC user-space emulation with **QEMU**
- Developed concurrent network and log analysis tool that reports anomalous device behavior; now standard in QA toolkit

Extra-Curricular

Software Team Lead Jan 2023 – Sep 2024
SFU Autonomous Robot Soccer Club *Burnaby, BC*

- Led software team in design and development of autonomous robot software in **C++** using **Qt6** and **Protobuf**
- Hosted weekly software team meetings and collaborated across sub-teams in weekly admin meetings
- Owned recruitment by reviewing applications, conducting technical interviews, and onboarding new members
- Collaborated with electrical, firmware, and mechanical teams to build robots for RoboCup

Monocular SLAM | *C++23, OpenCV, Computer Vision Alogirthms* Self-directed Project

- Implementing a SLAM pipeline in C++23 using OpenCV, Eigen, and Pangolin targeting resource constrained hardware, Raspberry Pi5. With a focus on modern C++ best-practices, and real-time constraints

Curricular Projects

Parabix ARM | *C++, SIMD, ARM NEON & SVE intrinsics* Compiler Technology - CMPT 980

- Implemented 67% improvement in performance of Parabix (**parallel computing**) on **AArch64** CPUs using **ARM NEON** and **SVE ISA**s
- Proved performance in **QEMU** emulated environment and confirmed results on Raspberry Pi hardware
- Technical Talk Slides | GitLab Code PR

Education

Simon Fraser University Burnaby, BC
Bachelor of Science in Computer Science *Graduated Sep 2025*