Ryan Vu

https://ryanvu612.github.io/ | ryanvu@cpp.edu | Villa Park, CA 92861

Education

California State Polytechnic University, Pomona (Cal Poly Pomona), *B.S. Computer Science* — Pomona, United States

- GPA: 3.97
- Leadership & Activities: Vietnamese Student Association Intern (2024-2025) → VCN Director (2025–2026); Data Science & AI Club; Competitive Club Tennis Team
- Coursework: Systems Programming, Data Structures and Advanced Programming, Computer Organization and Assembly Programming
- Expected Graduation: May, 2027

Engineering Experience

Fire Detection and Suppression Team (Ground Control Systems), — 02/2025 – present
Sponsored by Lockheed Martin — Pomona, United States

- Built **C++/Qt/QML ground control system** for **real-time multi-UAV command & control**, resilient telemetry in **back-end**, and scalable UI in **front-end**.
- **Collaborated** with the machine-learning team to integrate **live fire-detection video feeds**, aligning **interfaces** and **data contracts** for seamless ingest.
- Drove **multi-UAV state awareness** and **robust telemetry display** to maintain situational awareness over unreliable links

Health Information Technician / Intern, *Bach Diagnostics* — 08/2020 – 08/2024
Irvine, California

- **Automated workflows**, cutting per-claim handling time ~400% and saving 15–20 hrs/week.
- Optimized **Hamilton STAR robotics** platform throughput (2× improvement) and pipetting precision (+30%).
- Co-authored ADLM 2024 publication on **automation, robotics, and scientific computing.**

Software Lead, *FIRST Robotics Competition Team 4322* — 08/2020 – 05/2024
Orange, United States

- Directed subteam of 5–8; implemented **Agile workflows and technical mentorship**.
- Built **real-time telemetry, diagnostics, and autonomous control software**, reducing debugging time >90%.
- Delivered **mission-critical robotics software** at 2024 World Championships with zero blocking faults.

Additional Experience

Circulation Desk Student Assistant, *California State Polytechnic University, Pomona* — 08/2025 – Present
Pomona, California

- **Front-line customer service** in a **fast-paced** academic library; checked materials in/out using the **ALMA system** and supported **student & faculty account inquiries**.

Skills

Programming & Systems — C++, Python, C, Java, JavaScript, Multithreading, Parallel Programming, Operating Systems, Computer Architecture, Algorithms, Data Structures, Firmware

Tools & Frameworks — Git, Linux, UNIX, Qt/QML, WPILib, TensorFlow, Pytorch, OpenCV, Docker, CI/CD

Awards & Publications

Winner - FIRST Robotics Competition, Aerospace Valley Regional (2024) — 2024
Top placement among ~40+ teams.

Automation for the Isolation of Peripheral Blood Mononuclear cells (PBMCs) with Hamilton Robotics for T-Spot Testing, *Association for Diagnostics & Laboratory Medicine* — 2024