Guillermo Flores

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Education

Simon Fraser University — Burnaby, BC
Bachelor of Applied Science in Computer Engineering, GPA: 3.6/4.33, Dean's Honor Roll — *Sep. 2025 – Present*

Experience

Firmware Developer — Oct. 2026 – Present
SFU Robot Soccer — *Burnaby, BC*

- Developed real-time embedded C firmware on STM32 microcontrollers for autonomous RoboCup soccer robots
- Implemented motor control using interrupt-driven timers and PWM
- Built a communication protocol with packet framing and checksum validation over UART and SPI radio links
- Debugged I2C, SPI, UART, and CAN buses with logic analyzers and oscilloscopes during integration testing
- Collaborated through code reviews, pair programming, and documentation using Git and GitLab

Commercial Cook — Apr. 2023 – Present
Green Tee Country Club, Westwood Plateau — *Coquitlam, BC*

- Prepared banquet and à la carte meals for events of up to 280 guests in a fast-paced kitchen
- Communicated constantly with kitchen staff to coordinate high-volume service under tight time constraints
- Maintained food safety and operational standards during high-stress service rushes

Altar Server — Apr. 2012 – Present
All Saints Parish — *Coquitlam, BC*

- Mentored and trained around 30 younger and newer altar servers in proper technique and responsibilities
- Served reliably at church services for over 14 years

Projects

Electronic Dice | *Soldering, PCB Assembly* — Nov. 2025

- Assembled a working electronic dice by hand-soldering components onto a printed circuit board
- Learned soldering techniques from scratch and completed the full build within one week
- Inspected solder joints and tested the finished board to make sure it worked correctly

Student Budget Tracker | *C++* — Oct. 2025 – Dec. 2025

- Developed a budget enforcement feature for a C++ command-line program as part of a 5-member team
- Wrote logic to flag and restrict overspending across defined budget categories
- Validated enforcement algorithms through iterative debugging and unit testing
- Integrated the feature with teammates' input handling, data storage, and reporting modules

Automated Measuring Cup | *SolidWorks, CAD, Rapid Prototyping* — Sep. 2025 – Dec. 2025

- Led mechanical design for an 8-member team using CAD modeling and stress analysis
- Designed and tested a custom motor-driven dispensing mechanism across 2 prototype builds
- Met targeted volumetric tolerances through iterative bench testing
- Integrated mechanical subsystems with electrical circuits and software control algorithms

Technical Skills

Languages: C, C++, MATLAB
Protocols & Hardware: UART, SPI, I2C, CAN, STM32, Logic Analyzers, Oscilloscopes, Soldering, PCB Assembly
Developer Tools: Git, GitLab, SolidWorks, CAD Applications, MS Excel / Office
Practices: Unit Testing, Iterative Debugging, Code Review, Rapid Prototyping, Bench Testing, Technical Documentation