

# SEBASTIEN TERRADE

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## EDUCATION

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### Queen's University | Kingston ON

*Expected Graduation: April 2025*

B.S. Computer Engineering – GPA: 4.14/4.3 (96%) – Dean's Scholar

- 2<sup>nd</sup> Place - Queen's Engineering Competition, Junior Design
- 3<sup>rd</sup> Place - Next Generation of Medical Simulation Hackathon
- Courses: Algorithms, Fund. Of Info Structure, OOP, Microprocessor Systems, Digital Systems

### Nanyang Technological University | Singapore

*January 2024 – May 2024*

## TECHNICAL SKILLS

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- Languages: C/C++, Java, Python, Assembly, VHDL, Rust, SQL, HTML/CSS
- Tools and Frameworks: Quartus, MySQL, Git/Github/GitLab, Jupyter Notebook, Pandas, Figma, MS Office

## EMPLOYMENT RELATED EXPERIENCE

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### Queen's VEX U Robotics Team

*September 2022 – Present*

*Software and Electronics Project Lead*

- Led and collaborated on electronics and software projects for VEX robotics competition "Spin Up"
- Learned and implemented motion algorithms, camera processing and state machine design for the robot
- Designed electronic components and PCB for a NVIDIA Jetson Nano Interface using KiCAD
- Finished quarter finalist in the VEX U Robotics World Competition 2023

**Skills:** Rust · KiCAD · Git · Robotics · Teamwork · Competition · Strategy · Design

### Scientists in School, Greater Toronto Area

*May 2022 – August 2023*

*Summer Student Workshop Facilitator*

- Planned, organized, and effectively delivered in person and virtual workshops of assigned topic(s) related to engineering, math and sciences
- Booked meetings for workshops and followed up with organization's representatives
- Liaised with employers, various schools, daycares and library staff across Canada

**Skills:** Presentation Skills · Attention to Detail · Time Management · Non-profit Organizations · Training

## PERSONAL PROJECTS

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### UniSync

*May 2023 – July 2023*

- Developed a multifunctional program aimed at enhancing university student productivity which includes a to-do list, grade calculator, student dashboard, and performance tracker
- Utilized Java and MySQL for backend, and Java's JFrame library for frontend GUI
- Successfully created an app to improve academic performance, adopted by Computer Engineering students

### IV CatheterSIM

*March 2023*

- Developed a cost-effective IV task trainer for medical simulation during the Queen's Medical Hackathon
- Engineered an app and prototype, offering real-time guidance for vein insertion and anesthesia dosage
- Achieved third place in the competition, securing a \$1500 prize, by delivering an innovative solution that enhances medical training fidelity and accessibility

### FPGA-based RISC-32-Processor Implementation

*March 2023 – May 2023*

- Implemented main RISC-style instructions (ALU, Load/Store, Branch, Call/Return) for 32-bit processor in VHDL
- Successfully verified processor's integrity on FPGA through execution of a concise program on Quartus

### Automated Documentation Workflow

*August 2023 – Present*

- Developing a documentation storing workflow from google forms to a statically generated website to facilitate log production for QVEX, using project automate, HTML, markdown and GitLab PRs