Michael Han

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Skills

Programming: SAS, HTML, CSS, JavaScript, Java, C, C++, Python (NumPy, Pandas, Pygame), SQL and MATLAB
Designing: Figma, SOLIDWORKS CAD
Tools: React.js, Node.js, jQuery, Microsoft (Word, Excel, Power BI, PowerPoint), MongoDB, Git
Platforms: Arduino, Windows OS

Extracurricular Experience

Business Competitions Representative| Queen's Hyperloop Design Team   **Feb 2023 - Present**
- Presented control systems, systems design, and software at European Hyperloop Week in Scotland
- Selected to represent one of only 30 teams worldwide out of 2,000 to compete in the competition, demonstrating competitive edge, strategic planning, and industry knowledge.
- Compiled and synthesized data from 10 different teams into a comprehensive deliverable to produce customer-centric solutions that were metrics-driven and results-oriented.

Power Systems Engineer | Queen's Hyperloop Design Team   **Oct 2022 – Present**
- Reduced the size of the battery case by 55% through systems design optimizations
- Increased the number of batteries within the pod by 50% without compromising the integrity of the pod
- Redesigned the structure of the battery case using SOLIDWORKS to improve wire efficiency, battery heat release, and BMS placement

Quantitative Analyst | Queen's Algorithmic Network & Trading Team   **Sept 2022 - Present**
- Quantitatively analyzed financial markets, by use of Python through QuantConnect, with a highlight on the NASDAQ and TSE to create an algorithm for trading options spreads over a 3-month period.
- Utilized Python to analyze practical issues, or discrepancies within financial markets, by implementing mathematical and statistical techniques

Software Engineer | Queen's Biomechatronics Design Team   **Sept 2022 – Present**
- Designed and constructed load-bearing leg exoskeletons to assist firefighters
- Engineered algorithms using C and Python to compile data regarding the force load, and range of motion
- Ensured successful delivery of algorithms and code execution using Git

Engineering Student Representative | Queen's Engineering Competition   **Sept 2022 - Present**
- Designed a cross-functional robotic arm challenge for 25 students to compete in
- Organized a marketing plan to bring together 800+ first-year engineering students
- Collaborated with 50 teams to integrate 6 challenges and communicate with 141 delegates through notion and slack

Professional Experience

Operations Staff | City of Mississauga | Mississauga, ON, CA   **Sept 2021 - Present**
- Provide support to customers and activities in community centers by answering general inquiries and providing covid screening to 200 people a day
- Developed strong communication skills by supporting customers and reporting to facility supervisors
- Resolved issues in facilities through adaptability, attention to detail, and organized according to set schedules

Education

Computer Engineering, with Entrepreneurship | Queen's University   **Sept 2022 - April 2026**
Relevant Coursework: Data Structures and Algorithms, Practical Engineering and Design, Device and Systems Software
Highlights: 1 of 25 students in the specialized stream in the ECEi class of 2026 at Queen's University

Awards

Awards: Principal's Scholarship Queen's University, Distinguished Senior Athlete Award, 1st place Cawthra STEM Competition, Ontario Scholar, Citizenship Medallion
Hackathons: QHacks 2023 2nd Place
Interests: Baseball, Youth Athletics, Software Development, Startups, Venture Capital, Video Gaming, Hiking