

# Michael Han

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## Skills

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HTML | CSS | JavaScript | Java | C | C++ | Python (NumPy, Pandas, Pygame) | R | MATLAB | Figma | SOLIDWORKS | React.js | React Native | Node.js | Vue.js | Tailwind | MongoDB | Word | Excel | Power BI | PowerPoint | Git | Winnolin | Monolix | Arduino | Windows OS | OpenAI (gpt3, gpt4 API)

## Experience

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**Software Developer** | Queen's Technology and Media Association **March 2023 – Present**

- Developed a phone screentime app which punishes user for exceeding their set limit via a monetary fine.
- Building using Java, React Native, MongoDB, Stripe API. Also revamped org website using Javascript and Typescript

**Undergraduate Research Assistant** | University at Buffalo School of Pharmacy **May 2023 – August 2023**

- Performed mathematical modelling on large pharmacokinetics datasets comprising of 2,000+ data points using Python (Pandas), Winnolin and Monolix

**Strategy and Operations** | BizzAtomic **July 2023 – August 2023**

- Developed user acquisition strategies resulting in an increase of 200% new customers
- Performed market research and innovation ideating leading to a course content increase of 30%

**Power Systems Engineer** | Queen's Hyperloop Design Team **Oct 2022 – May 2023**

- Reduced the size of the battery case by 40% 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 **August 2022 – Apr 2023**

- Created an stock trading algorithm, using Python through QuantConnect, returning a 3% yield increase
- Traded a dynamic universe of NASDAQ stocks based on a moving average and rsi

**Software Engineer** | Queen's Biomechatronics Design Team **Sept 2022 – Apr 2023**

- Designed and constructed load-bearing leg exoskeletons to assist firefighters lift a load of 40 lbs
- Developed code using Arduino and Git to compile data from the force load, and range of motion

## Projects

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**Smart Flash Cards** | [Project Link](#)

- Developed a flashcard generator site which enables users to learn on their own by creating flashcards. Users were also able to upload a file containing anything they wanted to learn from which flashcards were automatically generated. Built with Vue.js, Tailwind, Flask, Python, Node, and the gpt API.

**Pitch Perfect** | [Project Link](#)

- Built an automatic pitch deck generator using Figma, Python, JavaScript, HTML/CSS, Flask, gpt API. The pitch generator created slides and a corresponding pitch script based on a prompt, a logo idea, and the length of your pitch.

## Education

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**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

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**Awards:** Principal's Scholarship Queen's University (\$4,000), Collision Scholar (\$1,300), Allan A Martin Alumni Award (\$1,000), Senior Athlete Award (\$500), 1<sup>st</sup> place Cawthra STEM Competition, Ontario Scholar, Citizenship Medallion

**Interests:** Sustainable Technology, Baseball, Youth Athletics, Software Development, Entrepreneurship, Hiking

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