

# Jake Feldman Starosta

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## Skills

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**Programming & Development:** Python, C, C++, Java, JavaScript, MATLAB, HTML, CSS, React, Git, Google APIs

**AI/ML:** PyTorch, Sklearn, Pandas, NumPy, LLM & Embedding Model APIs

**Hardware & Design:** SolidWorks, Circuit Analysis, LTSpice, Arduino, VHDL

## Experience

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**Conference Chair** – *Canadian Undergraduate Conference on AI* April 2025 - Present

- Leading a team of 12 volunteers to run the largest undergraduate conference on AI, hosting 340 attendees
- Working with top AI companies (Google, AWS, Cohere, Accenture), research labs (Vector Institute, Mila, Connected Minds) and renowned speakers (Geoffrey Hinton, Shimon Zilberstein)
- Expanded to Montreal, built partnerships with UofT, AIFS, and the AI Collective, and launched a newsletter
- Managing an operating budget of over \$30k

**Engineering Consultant Intern** – *Corecurrent Solutions* May 2025 - August 2025

- Reverse-engineered electronic components to identify IP infringement
- Proposed and implemented a tool to reduce the time to identify ICs by 60% using vectorized search
- Proposed and implemented a classification model to predict IC manufacturers with 94% accuracy

**Director of Design** – *QMIND: Queen's AI* April 2025 - Present

- Overseeing three AI projects: an automated medical-imaging triage system, an embedded neural network on a mobile robot and a retrieval-augmented generation consulting collaboration
- Leading advanced tutorials including topics in neural architectures, optimization, and technical research

**Project Manager** – *QMIND: Queen's AI* April 2024 - April 2025

- Managed a team of 6 undergraduate AI researchers to design a novel ML approach to genre transfer for symbolic music
- Researched 20+ papers to identify opportunities for cutting-edge work
- Presented our work at CUCAI 2025 and the Toronto AWS office

**Workshop Tutor** – *EngLinks* Sept 2024 - April 2025

- Taught large-group calculus tutorials for 250 engineering students at Queen's

**Full-Stack Developer** – *EduTutor* Jan 2025 - April 2025

- Designed a generative quiz-creation tool powered by LLMs
- Implemented quiz editing and saving features, improving usability for students

## Publications

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**Symbolic Music Genre Transfer** Conference Proceedings

Explored a novel adversarial VAE architecture for music genre transfer by leveraging instrument-specific features.

## Education

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**BEng in Applied Mathematics and Computer Engineering** – Queen's University Sept 2023 - April 2027E

3.95 GPA, Dean's List (all years)

**Relevant courses:** Electronics, Computer Architecture, Digital Systems, Microprocessors, Mechanics, Electromagnetism, Linear Algebra, Differential Equations, Economics, Algorithms, Software Development (C++), Data Structures (C), Computer Science (Java)