

JIANQING LIU

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EDUCATION

McMaster University

Bachelor of Software Engineering

Aug. 2021 – May 2026

Hamilton, ON

EXPERIENCE

Chief Architect

Medium AI

Mar. 2024 – Present

Hamilton, ON

- Secured **first place** in McMaster's Forge Startup competition, showcased at the **Elevate Festival Toronto**.
- Architected and deployed multi-region backends with a centralized **GPU cluster** on **Azure**.
- Set up **CI/CD pipelines**, ensured **HIPAA** compliance, and deployed monitoring tools using **Netdata** and **Grafana**.
- Led a team of **4 developers** to build a full-stack **React** app with a backend powered by **Express.js**, **GraphQL**, and **Prisma ORM**, integrated with **Stripe**, and featuring a **sophisticated speech processing pipeline**.

Control Systems Lead

McMaster Rocketry Team

May 2022 – Present

Hamilton, ON

- Led a team of **10+** engineers, managing projects, weekly meetings and technical workshops.
- Designed and reviewed **30+** PCBs in **KiCAD** and **Altium**, including **6-layer BGA STM32/ESP32** boards, rigid-flex PCBs, regulators, high speed USB, radios, and various sensors.
- Developed over **30k lines** of avionics software in **bare-metal Rust** for safety-critical applications
- Created a **custom real-time file system** in async Rust, filling a gap in the embedded ecosystem.
- Designed and implemented a high-performance airbrakes controller using **EKF** and **nonlinear MPC**.
- Built a **custom CAN protocol** with a wireless **ESP32** CAN bridge, enabling communication across **12 nodes**.
- Designed a modular rack-based avionics bay in **Onshape**, combining **3D printed** parts and **machined metal** parts.
- Simulated rocket aerodynamics, electrical systems, and mechanical structures using **Matlab** and **Simulink**.
- Worked on telemetry protocol, delta log compression, 3D visualizer, custom bootloader, strain gauges and more.

Full Stack Software Engineer

Wealthstack

Jun. 2022 – Sept. 2025

Oakville, ON

- Developed secure financial applications using **React** and **Django** with sophisticated **RBAC** and **data encryption**.
- Built a recursive routing and state management system with **React Router**, **MobX**, and **Framer Motion**, enabling nested modals and animated UI layers.
- Optimized complex **GraphQL** queries by combining requests and caching, reducing loading time by **230%**.
- Led the company's transition from JavaScript to **TypeScript**, improving development efficiency by **30%**.

Lead Developer

YRDSB Teach Assist Pro

Sep. 2019 – Jun. 2022

Markham, ON

- Independently developed and published mobile and web apps used by **over 11,000** YRDSB students to access grades.
- Leveraged the **Flutter** framework to rapidly develop mobile applications, delivering an MVP **within one month**.
- Received overwhelmingly positive user reviews, averaging **4.7/5 stars** on Google Play.
- Implemented a RESTful server with fault tolerance in mind, achieving **99.9%** availability.
- Analyzed JVM performance and utilized **Kotlin** coroutine to increase the server throughput by **5x**.

PROJECTS

Brevity | Typescript, React, GPT-3, AssemblyAI

Sep. 2022

- Led the development of Brevity, an AI-powered video summarizer with Q&A capabilities.
- Awarded Runner-Up **Finalist** at Canada's biggest hackathon among 200+ international projects.

SKILLS

Languages: Java, Python, Rust, SQL, MongoDB, JavaScript, Typescript, HTML/CSS, Dart, Lua, C++, Verilog

Frameworks: React, Next.js, Ktor, Django, Express.js, Flutter, Embassy

Developer Tools: Git, Github Actions, Linux, Docker, GCP, Azure, AWS, VS Code, IntelliJ, Eclipse, Figma

Engineering: Autodesk Inventor, Fusion 360, Solidworks, Onshape, Cura, Altium Designer, KiCAD, Matlab

Spoken Languages: Fluent in English and Mandarin

Keywords: Software Development, Computer Science