Techmeng Aing

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Education

Queen's University   2024 - 2028

Bachelor of Computer Science (Honours) – AI Specialization | Minor in Statistics (Science)
- **Courses:** Data Structures (C++), Computer Science (Python & Java), Linear Methods for AI, Computer Architecture (C & Assembly)

Experience

Software Engineer Intern   **Toronto, ON**

Clover Labs   *Incoming Summer 2026*
- Engineering **verticalized AI growth agents** ("leafs") as **SaaS systems** to drive **GTM automation**, targeting **$50M ARR** in 2026.

Extra-curricular

Technology Officer   **Kingston, ON**

QHacks   *Sep 2025 – Present*
- Directed technical strategy and code reviews for a **700+ participant** hackathon, scaling platform via **FastAPI** and **PostgreSQL**.
- Architected the 🔗 QHacks Dashboard using **TypeScript** and **Prisma**, centralizing real-time events and role-based access for staff.
- Engineered high-traffic 🔗 QHacks Website features, scaling for **1,000+ applicants** via **CI/CD pipelines** and **Vercel/Railway**.

Front-End Engineer   **Kingston, ON**

Queen's Computing Students' Association   *Aug 2025 – Present*
- Engineered 5 projects for **7,800+ users**, architecting a **React Native** app, booking platform, LLM agent, and e-commerce store.
- Architected the 🔗 COMPSA Website and digital infrastructure, scaling core systems and internal tools for **1,800+ students**.
- Partnered with faculty and executive portfolios to ship software, ensuring alignment with department-wide requirements.

Software Engineer   **Kingston, ON**

Synapsis Network – Application Development Division   *Jan 2025 – Aug 2025*
- Developed a mobile app for inflammatory bowel disease patients via **React Native**, **Firebase**, and **SQLite**, with **Figma** designs.
- Implemented scalable **Node.js + Supabase** backend services, optimizing queries and indexing for faster, reliable data delivery.
- Partnered with product and design teams to define features, deliver demos, and enhance user experience across releases.

Back-End Engineer   **Kingston, ON**

Queen's Game Development Club   *Jan 2025 – Apr 2025*
- Delivered the 🔗 QGDC Website from **Figma** to production using **JavaScript, HTML/ CSS** with responsive, accessible layouts.
- Maintained a platform serving **100+ hackathon participants** and hosting projects, ensuring performance during submissions.
- Built interactive showcases with filters and detail views, powered by a **Node.js + MySQL** backend for smooth content updates.

Software Engineer   **Kingston, ON**

Queen's Space Engineering Team – Onboard (OBC) Computer System   *Sep 2024 – Dec 2024*
- Architected CubeSat **OBC firmware** in **C++** using **NASA F´**, implementing **I^{2}C** drivers to synchronize **5+ flight subsystems**.
- Boosted link reliability **15%** through **100+ bench tests** on Raspberry Pi and microcontrollers, validating mission-critical protocols.
- Resolved hardware-software memory constraints using **CAD tools** to define and document flight-ready interface specifications.

Projects

◐ **Tracklet – SaaS Assignment Tracker** | *Next.js 16, TypeScript, PostgreSQL, Prisma, Stripe, Tailwind v4*
- Engineered a production SaaS at 🔗 tracklet.me serving **100+ active users** with a high-performance, spreadsheet-style interface.
- Architected a **TanStack Table** core with optimistic UI updates and custom **PATCH APIs** for sub-200ms inline editing.
- Integrated **Stripe** subscription lifecycles, **iCalendar** sync, and timezone-aware **Vercel Cron** services for automated reminders.
- Secured platform via edge-safe **Auth.js**, database-backed rate limiting, and brute-force protection with **GitHub Actions** CI/CD.

◐ **Shujia – Comics Tracking Platform** | *Next.js 15, TypeScript, Express, Prisma, PostgreSQL, AWS RDS*
- Architected a **monorepo** at 🔗 shujia.dev utilizing **Express.js microservices** for metadata ingestion and **50+ active users**.
- Engineered an **adapter layer** to normalize upstream schema drift into a strictly-typed, **OpenAPI-compliant** data model.
- Implemented **TOTP 2FA**, stateful **OAuth 2.0**, and a **SHA256** session engine with in-memory caching for sub-50ms lookups.
- Developed a **probabilistic maintenance engine** and Prisma telemetry to optimize **Postgres** under high-concurrency loads.

Skills

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML/CSS, SQL, Bash
Frameworks: React, React Native, Next.js, Node.js, FastAPI, Flask, Spring Boot, Tailwind CSS, Redux, TensorFlow, Power BI
Tools and Libraries: AWS, Docker, Kubernetes, Terraform, Git, Cloudflare, Supabase, Linux, PostgreSQL, Tableau, REST APIs, Figma