

Bryan Kuang

Computer Engineering Student

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EDUCATION

•Bachelor of Applied Science in Computer Engineering

2023 - 2028

University of Waterloo, Waterloo, ON

CGPA: 3.8

PERSONAL PROJECTS

•RelicHub – E-commerce Admin Platform

Full-stack admin dashboard for managing products with performance and localization support

- **Technologies:** Next.js 15, React 19, TypeScript, Prisma ORM, PostgreSQL (Neon), NextAuth.js, next-intl
- Built a **production-ready admin dashboard** that allows authenticated users to manage product listings, supporting real-world workflows such as browsing, filtering, and editing records
- Designed and implemented **type-safe backend APIs** with Prisma and PostgreSQL to handle **dozens of products**, including validation and cursor-based pagination
- Improved maintainability and development speed by creating **12+ reusable UI components**, reducing duplicated markup by **~30%**
- Enabled **English / Chinese localization** across pages using **next-intl**, making the platform accessible to international users

•PlanForge – AI-driven Project Planning Desktop App

Cross-platform desktop app that turns user goals into structured, trackable project plans

- **Technologies:** Electron 28, React 18, TypeScript, Vite 5, SQLite (Prisma), OpenAI API, Tailwind CSS, shadcn/ui
- Built a **desktop application** that converts free-text user goals into **structured project plans** with tasks, milestones, and dependencies using GPT
- Designed a clear **data model** with Prisma to persist projects locally in **SQLite**, enabling a fully **offline-first** experience
- Implemented intuitive **Kanban and Gantt views** with drag-and-drop interactions, allowing users to visualize and adjust project timelines
- Packaged and distributed the app for **macOS (ARM/x64), Windows, and Linux**, with CI pipelines producing installable binaries in minutes
- Secured sensitive API credentials using the **OS keychain** and added automated tests for AI parsing logic to ensure reliability

EXPERIENCE

•Privacy Technical Review Engineer

Jan 2025 – April 2025

ByteDance (TikTok International)

Beijing, China

- Conducted **privacy-focused functional reproduction testing** for new TikTok International features, systematically triggering user flows to analyze data access and transmission behavior
- Performed **network traffic analysis** via packet capture to inspect API requests, payload structures, and third-party communications, producing reproducible technical evidence
- Authored structured **technical review reports** summarizing data flows, permission usage, and potential privacy risks to assist compliance and mitigation decisions
- Developed lightweight **automation and office scripts** (Python) to improve testing efficiency, data organization, and reporting workflows

•Web Development Lead

Sep 2025 – Dec 2025

Electrium Mobility (Student Design Team)

Waterloo, ON

- Led the **web development subteam**, assigning tasks and coordinating delivery for multiple projects including an internal platform and **3 Discord bots**
- Developed and maintained the team's **public website** (electriummobility.com) used for recruitment and external communication
- Built and deployed a **merchandise storefront** (electrium-store.vercel.app), owning end-to-end implementation and hosting
- Supported **cloud deployment** of the team's documentation site (docs.electriummobility.com) and mentored new members through code reviews and technical guidance

TECHNICAL SKILLS

Programming Languages: Java, TypeScript/JavaScript, Python, C/C++, SQL, Bash

Backend & API Development: Spring Boot, Node.js (Express), Flask, RESTful API design, Authentication

Databases & Data Access: PostgreSQL, SQLite, MySQL, Prisma ORM

DevOps & Deployment: Docker, GitHub Actions (CI/CD), Vercel, Git/GitHub

Testing & Quality: Vitest, Jest, Playwright, ESLint, Lighthouse

Networking & Debugging: Charles Proxy, Chrome DevTools (Network), Packet capture & traffic analysis

Core Concepts: Backend architecture, API design, Data modeling, Performance tuning, Offline-first systems