James Cai

📞 +1 (647) 674-8525 | 🔗 jamescai.com | ✉ j239cai@uwaterloo.ca | 💼 linkedin.com/in/jam-cai | 🐙 github.com/Jam-Cai

EDUCATION

University of Waterloo   **GPA: 3.96/4.0**
Honours Bachelor of Computer Science (BCS), Co-op   *Sep 2024 - May 2029*
- **Awards:** Gordon S. Lang Scholarship ($28,000), B.P. Dammizio Entrance Scholarship ($4,000)
- **Courses:** Object-Oriented Software Development, Algorithm Design & Data Abstraction, Designing Functional Programs, Logic & Computation, Tools & Techniques for Software Development, Probability

TECHNICAL SKILLS

Languages: Java, Kotlin, C#, Python, C, C++, Rust, JavaScript, TypeScript, HTML, CSS, SQL
Technologies: React.js, Express.js, MongoDB, Redis, PostgreSQL, Auth0, Flask, ASOP, OpenGL, Jetpack Compose
Development Tools: Git, Docker, Kubernetes, Android Studio, Linux, Bash, Postman, Jenkins, Jira

EXPERIENCE

Ford Motor Company | *Kotlin, C++, Jetpack Compose, Filament, OpenGL, Docker, Jenkins*   May 2025 – Aug 2025
Software Engineering Intern   *Waterloo, ON*
- Optimized low-levelt graphics rendering pipeline for in-vehicle displays by profiling memory usage and GPU draw calls, reducing frame latency by **28%** and improving rendering efficiency on **AOSP**-based infotainment systems.
- Productized real-time "Nearby Gas Station" widget using GPS and fuel telemetry and secured 2026 rollout approval from 10+ senior stakeholders for deployment to **1.5M+** vehicles.
- Developed custom Vehicle HAL modules in **C++** for Ford-specific CAN sensors, exposing standardized APIs to Kotlin applications and supporting 200+ vehicle properties with **99.2%** data reliability across infotainment systems.

Mysti.ai | *TypeScript, React Native, Express.js, Auth0, Redis*   Jan 2025 – May 2025
Software Engineering Intern   *Toronto, ON*
- Designed and launched a modular microservice using **Express.js** and **Redis** Pub/Sub to manage health record sync across 10K+ daily users, reducing cross-platform API latency by **37%**.
- Architected rate-limiting and session management infrastructure using **Redis** and **Auth0** integration, enabling seamless user experience across mobile platforms while maintaining **sub-300ms** authentication response times.
- Optimized **React Native** performance by implementing lazy loading, memory profiling, and component virtualization, eliminating **40%** of UI lag during data-heavy operations.

UW Orbital | *TypeScript, Python, React, FastAPI, Docker, PostgreSQL*   Sept 2024 – Jan 2025
Software Developer   *Waterloo, ON*
- Built backend functionality using **Python** and **FastAPI** with robust data validation, command endpoints, and custom logger middleware for real-time cubesat data processing, achieving **95%** uptime.
- Developed a command management interface using **React** and **TypeScript** that streamlined satellite command uplinks and ground station operations, reducing user interaction latency by **25%**.
- Optimized development workflows using comprehensive Git version control and automated CI/CD pipelines, while collaborating in cross-disciplinary scrums on CubeSat telemetry, achieving **40%** faster deployment cycles.

PROJECTS

🐙 **MeetCode — Real-Time AI Mock Interview Platform (1K+ Users)** | *React, JavaScript, Socket.io, Express, Redis, MongoDB*
- Shipped meetcode.world 🔗 (1K+ Users), an interactive interview tool with in-app code execution & AI voice feedback.
- Engineered a dynamic interface with React and Next.js to simulate real-time interviews and enable live code execution.
- Developed scalable RESTful APIs with Express to manage sessions, handle real-time data streams, and authenticate users.

🐙 **Replate — AI Food Sustainability & Delivery Platform (GenAI Genesis Winner)** | *JavaScript, Next.js, Express.js, Flask, GCP*
- Won the Best AI Eco-Mobility Hack among **650+** participants at GenAI Genesis 2025, Canada's largest AI hackathon.
- Engineered multi-agent AI system with Gemini, Cohere, using a RAG pipeline to match user preferences to surplus food.

🐙 **FairFi — A Tool to Detect Bias in Financial Services (DeltaHacks Winner)** | *JavaScript, Next.js, Express.js, MongoDB, Twilio*
- Won the NSBE X P&G Fintech Challenge among **500+** participants at McMaster University's DeltaHacks 11.
- Built a web app using Twilio and Cohere to simulate AI-driven customer calls, detect bias, and store data in MongoDB.