James Cai

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Education

University of Waterloo **GPA: 3.96/4.0**

Honours Bachelor of Computer Science (BCS), Co-op *Sept 2024 – May 2029*

- **Awards:** Gordon S. Lang Scholarship ($28,000), B.P. Dammizio Entrance Scholarship ($4,000)

Technical Skills

Languages: Java, C#, Python, C, C++, JavaScript, TypeScript, HTML, CSS, SQL
Technologies: React.js, Next.js, Node.js, Express.js, Tailwind CSS, MongoDB, Redis, Flask, PyTorch, LangGraph, Pandas
Development Tools: Git, Docker, Kubernetes, Linux (Bash), Visual Studio Code, Jupyter Notebook, Postman, Microsoft Office

Experience

Ford Motor Company | *Kotlin, C++, AOSP* May 2025 – Present

Software Development Intern *Waterloo, ON*

- Engineered modular media-system components in Kotlin for Ford's Infotainment platform, driving a **15%** reduction in load times through targeted performance optimizations.
- Developed reusable infotainment UI widgets in Java and Kotlin for in-vehicle applications, reducing UI development time by 30% and accelerating feature integration by **25%**.

Mysti.ai | *TypeScript, React Native, Express.js* Feb 2025 – May 2025

Software Engineering Intern *Toronto, ON*

- Developed and implemented a dedicated page for tracking vaccinations and allergens, which reduced manual data entry errors by **35%** through real-time validation and interactive feedback.
- Configured an automated CI/CD pipeline for Android that integrated code quality checks, automated testing, and deployment routines, cutting build times by **40%** and boosting deployment frequency by **25%**.
- Spearheaded the debugging process by identifying and resolving more than 50 critical Android-specific issues in a codebase initially optimized for iOS, reducing OS-related errors by **80%**.

Student Researcher Jul 2023 – June 2024

Temerty Faculty of Medicine, University of Toronto *Toronto, ON*

- Conducted research on biopolymers and 3D-printed models from medical imaging to advance medical education.
- Earned **1st place** in the STEAM-D Summer Research Competition and **3rd place** in the Entrepreneur's Impact Marathon.
- Authored a 10-page research report detailing methodology, data insights, and literature review, reviewed by three faculty members, and presented to an audience of **50+** students, researchers, and teaching staff.
- Improved medical education comprehension by creating detailed 3D-printed models, receiving positive feedback from **97%** of the participants in surveys.

Projects

MeetCode — Real-Time AI Mock Interview Platform (1K+ Users) | *React, JavaScript, Socket.io, Express, Redis, MongoDB, OpenAI*

- 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.
- Integrated OpenAI's API for semantic analysis and ElevenLabs for voice synthesis, enabling sub-2-second responses.
- 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 **623** 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.
- Integrated Socket.io and Twilio for real-time meal recommendations and order status notifications.

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 Equity Challenge among **496** 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.
- Designed a dashboard for real-time sentiment analysis using Cohere's Command R+ Model to visualize bias.