Amber (Jiale) Wang

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TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, HTML/CSS, Go, JAX, C/C++, SQL, PHP, Kotlin, MATLAB, R

Frameworks: React, React Native, Node.js, Express.js, Tailwind, TensorFlow, LangChain, Scikit-learn

Tools and Platforms: vLLM, Unix, AWS, Azure, Selenium, MySQL, MongoDB, Mongoose, Git, Power Automate

EDUCATION

University of Waterloo — Waterloo, Ontario

Master of Mathematics in Computer Science; Advisor: Pengyu Nie; GPA: 97/100 — *Sept 2024 – Dec 2026*

- Research Interests: Leveraging machine learning to improve software engineering, focusing on testing automation, code analysis using natural language processing, and data-driven development optimization.

Queen's University — Kingston, Ontario

Bachelor of Computing, Mathematics and Analytics; GPA: 4.0/4.3 — *Sept 2019 – Apr 2024*

- Relevant Coursework: Algorithms, Data Structures, Software Architecture, Database Management, Computer Architecture, Operating Systems, Formal Methods in Software Eng, Statistics and Probability.

PUBLICATIONS

- **Jiale Amber Wang**, Kaiyuan Wang, and Pengyu Nie. TestEvo-Bench: An Executable and Live Benchmark for Test and Code Co-Evolution. In International Conference on AI-powered Software (AIWare). 2026.
- **Jiale Amber Wang**, Kaiyuan Wang, and Pengyu Nie. Efficient Incremental Code Coverage Analysis for Regression Test Suites. In International Conference on Automated Software Engineering (ASE). 2024.
- Jerin Yasmin, **Jiale Amber Wang**, Yuan Tian, Bram Adams. An Empirical Study of Developers' Challenges in Implementing Workflows as Code: A Case Study on Apache Airflow. Journal of Systems and Software. 2024.

WORK EXPERIENCE

Software Engineer Intern — Mountain View, CA

Google — *May 2026 – Aug 2026*

- Enabled **HybridSim**, a **TPU** performance simulator, for third-party (3P) workloads, achieving accuracy improvements of up to **90%**.
- Built an autonomous **agentic** configuration optimizer with a **reward system** and **context management**; verified on 4 training workloads, achieving up to **16%** higher **TPU** throughput.

AI Software Developer — Toronto, ON

CGI — *Sept 2025 – Dec 2025*

- Developed an AI-driven code analysis platform with code **embedding**, **indexing**, **AST parsing**, and a **RAG** pipeline, leveraging **LLMs** to generate codebase insights for BAs and developers.
- Enhanced a Ticket Analyzer with **NLP clustering** and **classification** pipelines and a similarity-scoring engine, improving incident classification accuracy.

Machine Learning Developer — Toronto, ON

Royal Bank of Canada — *May 2025 – Aug 2025*

- Prototyped and evaluated agentic AI coding tools (**Cursor**, **Devin**, **Windsurf**) on real-world RBC engineering tasks, assessing **code understanding**, **test generation**, and automation capabilities.
- Built automated **Python** benchmarks across curated RBC repositories measuring task success rate and code correctness; proposed integration strategies for intelligent software assistance.

Automation Engineer — Ottawa, ON

Ericsson Canada Inc. — *Sept 2022 – Dec 2023*

- Built and maintained 10+ automated workflows with **Power Automate**, **Azure**, and **Python**, generating 20+ error-free daily dashboards and reducing manual processes by **90%**.
- Developed an automated license-request email server serving 400+ users, and a **React.js** web app featuring a cause-and-effect chain builder.