

Jue Wang

Computer Science @ Waterloo • Agent/LLM Research @ Huawei • Full-stack & ML

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Education

University of Waterloo, Bachelor of Computer Science

Sep 2024 – Apr 2029

Tech Stacks

Languages: C, C++, Java, Python, JavaScript, HTML, CSS, PostgreSQL

Frameworks & Libraries: Vue.js, Vue-ECharts, Spring Boot, PyTorch, Playwright

Tools & Platforms: Git, GitHub, Docker, Linux, WebMCP, BrowserGym, Visual Studio Code, CLion, PyCharm, Eclipse, QtCreator

Experience

Co-op Researcher, Web Technology Lab, Huawei Technologies -- Markham, ON

May 2026 - Aug 2026

- Built **WebMCP** tool suites for **9+ sites** (shopping, CMS, GitLab, Reddit, maps, Wikipedia, social), exposing site actions as **navigator.modelContext** tools an LLM agent calls directly.
- Engineered the **Python** evaluation harness -- a site-injection proxy plus automated tool verification -- to benchmark agents against the tools across **Docker** sites.
- Built and debugged the browser agent (tool dispatch, live catalog injection, on-demand schemas, page observation) for an **A/B study** on **WebArena** (**5 modes**; qwen, doubao).
- Diagnosed cross-stack failures -- a tool-dispatch bug behind **111 failures / 36 tasks** and element-ID drift (error rate cut **38%** to **18%**) -- and authored the A/B protocol and telemetry.

Full Stack Engineer, Innovation AI -- Remote (San Jose, USA)

May 2025 - Aug 2025

- Developed a fully interactive world-map component with **Vue-ECharts** to deliver geographic visualizations.
- Implemented an asynchronous PDF preview feature with robust back-end feedback handling, enabling **real-time rendering** and **responsive error management**.
- Developed a full-stack balance module that lets authenticated users securely deposit funds through an integrated front-end interface and back-end validation.
- Implemented a **PostgreSQL-powered** store page exposing items with images and prices for platform users.
- Engineered a **transaction-safe cart system** that persists selections and debits user balances in real time.

Projects

AI Language Translation System (Amazon Externship)

Jan 2025 - Apr 2025

- Developed a **Transformer-based model** in **PyTorch** to perform language translation with **90% accuracy**.
- Processed and tokenized a dataset of **100,000+ raw entries** to optimize model training efficiency.
- Benchmarked model accuracy against classical algorithms including **SVM** and **Decision Trees**.
- Analyzed distinct neural architectures (**CNN**, **RNN**) to fine-tune network hyperparameters.

Biquadris - Multiplayer Tetris Game -- C++, X11, OOP

Dec 2025

- Engineered a competitive 1v1 Tetris variant in **C++**, utilizing **X11** for graphical rendering and decoupling core game logic from the user interface.
- Implemented dynamic special abilities (e.g., blindness, heavy blocks) using the **Decorator Pattern**, allowing for flexible runtime modification of game entities.
- Applied the **Observer Pattern** to synchronize game state updates across both graphical and text-based displays, ensuring consistency in real-time.

WeChat AI Reply Agent -- Python, Playwright, Ollama, SQLite, Win32 API

Jun 2026

- Drafts WeChat replies from screenshots via a **vision-language model**, pasting a draft only.
- Swappable backends: local **Ollama** vision model or **ChatGPT Web** driven via **Playwright** over CDP.