

Brian Ma

Software engineer — agentic development & developer tooling

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PROFILE

I am a curious, adaptable engineer who takes ownership of projects end to end and continually looks for ways to improve. I hold myself accountable for the quality of my work and help those around me succeed by understanding what is needed, what is missing, and what is feasible. Two projects that demonstrate my engineering principles and UX decision-making, respectively, are **git-dupe** and **URL Jumper**.

EXPERIENCE

Jan 2025 –
Present

DataAnnotation · Software Engineering Specialist, AI Training · New York, NY · Remote contract

- Engineered an orchestration harness that split long-horizon tasks into automated agent sessions, **improving internal benchmark scores by up to 30%**.
- Developed a strategy for agents to rederive correctness invariants from stable specification references, **improving correctness benchmark performance by up to 40%**.
- Designed self-correcting agent instructions with linked references and evaluated their effects on task performance and context use.
- Evaluated **30+ client models** with original adversarial tests to identify and characterize failure modes.

Agent Orchestration · LLM Evaluation · Context Engineering · Technical Writing

Jan 2025 –
Dec 2025

Connective Capital · Software Engineer · Palo Alto, CA · Remote contract

- Owned contract scraping end to end as the primary developer, building and optimizing pipelines to process **10+ years of filings across 900,000+ companies**.

Python · Docker · Virtual Machines · MySQL

Jan 2024 –
May 2025

Nexus Energy · Software Engineer · Toronto, ON · Hybrid full-time

- Optimized legacy database synchronization, **improving speed by 75% on average**.
- Migrated legacy pipelines and tuned processing windows to **improve average response times by 20%**.
- Led a team of developers as Technical Project Manager for the company website.
- Automated email reports and scheduled notifications to reduce repetitive operational work.

Python · Microsoft Azure · Docker · Rundeck · Go · MySQL

PROJECTS

2025 –
Present

git-dupe · Private version control alongside public projects

- Built a Rust Git extension that versions private notes, scripts, and agent instructions in a shared working tree, with **independent history and remotes**.
- Implemented safeguards against accidental publication to project remotes; built compatibility checks across **14 Git releases on Linux and macOS**.

Rust · Git Internals · CLI Design · Integration Testing

2024 –
2026

URL Jumper · Keyboard shortcuts for websites and custom searches

- Built a Chrome extension for opening saved sites and custom searches by name from the popup or address bar.
- Engineered a plain-text mapping format with list and text editors and **three-way merging** to reconcile concurrent edits without silently overwriting changes.

TypeScript · React · Chrome Extensions · Vitest · Playwright

2024 -
2026

agentic-cli-adapter · Cross-platform coding agent orchestration

- Built a unified Go CLI for delegating tasks across **six coding agent platforms**: Claude Code, Codex, Cursor, Devin, Muse Code, and OpenCode; normalized invocation and final-response extraction.
- Engineered process cleanup on cancellation: descendant termination and zombie reaping on Linux, and nested Job Object containment on Windows.

Go · Linux · Windows API · Process Lifecycle Management

2023

brianweihaoma.com · Personal website

- Built an Astro site with custom **WebGL/GLSL shaders** and animated page transitions that preserve the live scene; added context-loss recovery and visual regression checks.

TypeScript · WebGL · GLSL · Astro · Playwright

EDUCATION

2019 - 2023

University of Toronto · Honours Bachelor of Science, Computer Science

- Coursework: Operating Systems, Algorithms & Data Structures, Databases, Parallel Programming, Machine Learning, Artificial Intelligence.

AWARDS

2019, 2021
2019

ICPC ECNA Regional Bronze Medal · University of Toronto team

ECOO Finalist · York Mills Collegiate Institute team

SKILLS

Languages	Python, C/C++, Go, C#, TypeScript, Rust, SQL, Bash
Agents & LLMs	Agent orchestration, harness and skills design, LLM evaluation, adversarial testing, context engineering
Data & Cloud	MySQL, data pipelines, Docker, Microsoft Azure, AWS, Oracle Cloud, virtual machines
Tools & Systems	Git, Linux, Windows, macOS, Angular, React, Astro, WebGL, Vitest, Playwright
Knowledge	Object-oriented programming, networking, algorithms, MVVM, computer security, prompt engineering