

Austin Jiang

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Dear Cerebras Systems recruiting team,

I am a Computer Science student at the University of Waterloo applying for the AI Software Engineering Intern (Stack, Runtime, MLE) role. I am particularly passionate about **performance, runtime systems, and machine learning infrastructure**.

I am currently an undergraduate research assistant in the Multicore Lab at Waterloo, where I work on extending Verlib (PPoPP'24) with **lock-free GPU data structures** for efficient range queries. My work focuses on correctness and performance under concurrency, including implementing CPU baselines for controlled benchmarking and debugging low-level GPU systems code.

Previously at Wolfram Research, I worked on a parallel cellular automata runtime, focusing on execution design, performance optimization, and benchmarking. I implemented sparse and dense execution paths and achieved a **127% speedup** on low-activity states, supported by a custom benchmarking harness.

My competitive programming background, including **two-time Canadian Computing Olympiad top 10** and **USACO Platinum**, reflects a solid understanding of data structures, algorithms, and systems fundamentals.

Sincerely,
Austin Jiang