Austin Jiang

a68jiang@uwaterloo.ca | github.com/AustinBoyuJiang | linkedin.com/in/austin-boyu-jiang

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, especially work that bridges systems engineering and large-scale ML execution.

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 designed tiled update and halo exchange mechanisms, implemented sparse and dense execution paths, and built benchmarking tools to evaluate scalability and runtime behavior.

In addition, my competitive programming background (two-time Canadian Computing Olympiad top 10 and USACO Platinum) reflects a solid understanding of data structures, algorithms, and systems fundamentals, which I apply consistently in systems and performance engineering work.

Sincerely,
Austin Jiang