Yongkang Cheng

chengyongkang.me | 437-663-2855 | iwmain@outlook.com | github.com/Ken-2511

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Dear Hiring Manager,

I am excited to apply for the Low-Level Software Intern role at Tenstorrent. As a BASc Computer Engineering student at the University of Toronto focused on systems, performance, and close-to-metal development, I am drawn to Tenstorrent's vision of unifying hardware and software to power next-generation AI. I am ready to contribute onsite in Toronto, working with engineers who push kernel-level performance and ML workloads.

Beyond what is in my resume, several projects from my main resume show I learn fast and ship:

- **Handwritten Text Recognition:** Led a PyTorch CRNN effort with strong word/character accuracy, giving me intuition for how low-level kernels surface at the framework level.
- **Diary with AI Feedback:** Optimized end-to-end data and request pipelines, reducing average load time from 10 s to 0.5 s through measurement-driven iteration.
- **Photogate Speed Measurement:** Built laser-based timing with sub-150 μs precision on microcontrollers, reinforcing comfort with interrupts, timers, and debouncing.
- **WillPower:** Deployed a Raspberry Pi–based data path with Nginx, FastAPI, and libcurl, strengthening my systems wiring and reliability instincts.

I am comfortable diving into unfamiliar codebases, instrumenting and profiling to find bottlenecks, and collaborating to get real workloads running. I bring strong C/C++, RISC-V familiarity, a bias for fixed-point and vectorizable kernels when appropriate, and a disciplined approach to debugging. Most of all, I learn extremely fast and enjoy turning performance mysteries into clear, testable hypotheses.

Thank you for your time and consideration. I would welcome the chance to discuss how I can contribute to Tenstorrent's low-level software stack and help accelerate real ML workloads on your hardware.

Sincerely,

Yongkang Cheng