

Peisong Xiao

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[LinkedIn](#) [Personal Site](#) [Self-hosted Git Server](#)

Work Experiences

Super.com <i>Software Engineering Intern - Infrastructure</i>	Remote 01/2026 - 04/2026
<ul style="list-style-type: none">Boost company-wide productivity through <u>integration of AI</u> in tools.Work with cutting edge infrastructure tools to <u>accelerate development and deployment</u> across the company.Contribute directly to the bottom line with <u>cost savings</u> initiatives and <u>optimizations</u>.<u>Transferable skills:</u> CI/CD, Linux, AWS, Kubernetes, Terraform, Helm, DevEx & DevOps, AI integration.	
Huawei Canada <i>Assistant Network Engineer, Intern (DCN Lab)</i>	Waterloo 05/2025 - 08/2025
<ul style="list-style-type: none">Conducted experiments on <u>datacenter networks</u> targeting <u>LLM workloads</u> using <u>network simulators</u>.Helped develop proprietary <u>congestion control</u> schemes and cross analyzed against the latest <u>UEC</u> schemes.Analyzed the performance of different <u>load balancing</u> schemes and <u>investigated</u> performance degradations.Designed and implemented a <u>link failure</u> and <u>dynamic routing adjustment</u> scheme in simulation.Researched networking for <u>AI/ML computation</u> providers and novel inference hardware (Cerebras WSE).<u>Transferable skills:</u> Linux, C++, Python, high-performance networking, data visualization, analysis, and reporting, network simulation, test automation, researching, teamwork, hardware-aware algorithm design.	
Nokia <i>IP Router Platform Testing Dev Student (Satellite Team)</i>	Ottawa 09/2024 - 12/2024
<ul style="list-style-type: none">Received training on <u>IP-based networks</u> and related tools and used scripts to <u>automate</u> regression testing.Constructed new framework <u>reducing setup time</u> for regression testing by up to 60%.Designed new testing framework to <u>reduce code duplication</u> by 80% and <u>increased test coverage</u> by 500%.<u>Transferable skills:</u> Linux, Tcl, scripting, network infrastructure, test design, teamwork, automation.	

Side Projects

ThreadWeaver - Lock-Free Multithread Communication Library (Repo)	12/2025 - Present
<ul style="list-style-type: none">RDMA-inspired implementations of SPSC, MPSC, and SPMC queues without <u>CAS</u> retry loops.Built-in <u>thread-local scheduler</u> to guarantee <u>bounded waiting</u> and provide <u>fairness</u>.Clear ownership and <u>cache line-aligned</u> memory layout to <u>reduce cache coherence traffic</u> and <u>avoid false sharing</u>.<u>Transferable skills:</u> C++, systems architecture, concurrency, hardware-specific optimizations, algorithms.	
DOFS - Datacenter Observability and Failover Simulator (Repo)	08/2025 - Present
<ul style="list-style-type: none">Framework for modeling <u>datacenters</u> and <u>failover</u> policies.Designed to scale by providing a simple configuration process and parallel/queued simulations.<u>Transferable skills:</u> C++, Python, systems architecture, event-driven simulation, networking.	
ROSE - RDMA Over SPI Engine (Repo)	05/2025 - 09/2025
<ul style="list-style-type: none">SPI-based, <u>RDMA-enabled</u>, network system based on Raspberry Pi's and <u>FPGAs</u>.Self-designed low-cost networking system for <u>ultra-low latency</u> networking with <u>scale up</u> potential.<u>Transferable skills:</u> Verilog/SystemVerilog, C, Linux kernel programming, hardware programming, systems design.	
2020 National Olympiad in Informatics (NOIP 2020) 1st Prize	12/2020
<ul style="list-style-type: none"><u>Transferable skills:</u> C++, data structures and algorithms design.	

Personal Sites

Main Site peisongxiao.com

Git Server git.peisongxiao.com/peisongxiao

Private LLM Inference Server

- Exposed to other servers using virtual private networks with end-to-end encryption via WireGuard.
- Relevant skills: Linux, **systems engineering**, LLM inference service, **network security**, VPN, **nginx**.

Skills Summary

- Hard skills:** C, C++, Python, Tcl, Git, Linux, Verilog, SystemVerilog, data structures, algorithms, linear programming, test automation, data visualization, high-performance networking, system design.
- Soft skills:** analytical thinking, self-motivation, adaptability, teamwork, interpersonal communication, conflict resolution, time management, organization, leadership, presentation.

Education

Bachelor of Computer Science GPA: 3.9/4.0 [University of Waterloo](#) Waterloo, Canada 2023 - 2028