

Peisong Xiao

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Work Experiences

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

Huawei Canada Assistant Network Engineer, Intern (DCN Lab) **Waterloo** 05/2025 - 08/2025

- Conducted experiments on **datacenter networks** targeting **LLM workloads** using **network simulators**.
- Helped develop proprietary **congestion control** schemes and cross analyzed against the latest **UEC** schemes.
- Analyzed the performance of different **load balancing** schemes and **investigated performance degradations**.
- Designed and implemented a **link failure** and **dynamic routing adjustment** scheme in simulation.
- Researched networking for **AI/ML computation** providers and novel inference hardware (Cerebras WSE).
- Transferable skills:** Linux, C++, Python, **high-performance networking**, **data visualization**, **analysis**, and **reporting**, network simulation, test automation, **researching**, teamwork, **hardware-aware algorithm design**.

Nokia IP Router Platform Testing Dev Student (Satellite Team) **Ottawa** 09/2024 - 12/2024

- Received training on **IP-based networks** and related tools and used scripts to **automate** regression testing.
- Constructed new framework **reducing setup time** for regression testing by up to 60%.
- Designed new testing framework to **reduce code duplication** by 80% and **increased test coverage by 500%**.
- Transferable skills:** Linux, Tcl, scripting, **network infrastructure**, **test design**, **teamwork**, **automation**.

Side Projects

DOFS - Datacenter Observability and Failover Simulator ([Repo](#)) 08/2025 - Present

- Framework for modeling datacenters and failover policies.
- Designed to scale by providing a simple configuration process and parallel/queued simulations.
- Transferable skills:** C++, Python, **system architecture**, **event-driven simulation**, networking.

Windows Driver Worm Removal 08/2025

- Investigated and removed a **worm** concealed within Windows **network and IO drivers**.
- Transferable skills:** **Operating system internals**, **cybersecurity**, troubleshooting, **root-cause analysis**.

ROSE - RDMA Over SPI Engine ([Repo](#)) 05/2025 - Present

- SPI-based, **RDMA-enabled**, network system based on Raspberry Pi's and **FPGA**.
- Self-designed low-cost networking** system for **ultra-low latency networking with scale up potential**.
- Transferable skills:** **Verilog/SystemVerilog**, C, **Linux kernel programming**, hardware programming, system design, high-performance networking, **hardware/software co-design**.

cc3k - Sequentially Generated Dungeon Crawler ([Repo](#)) 06/2024 - 07/2024

- An interactive TUI game that explores a sequentially generated dungeon with **abundant additional content**.
- Transferable skills:** C++, object-oriented design/programming, algorithm design, team collaboration, git.

2020 National Olympiad in Informatics (NOIP 2020) 1st Prize 12/2020

- Transferable skills:** C++, data structures and algorithms design.

Personal Sites

Main Site peisongxiao.com

- Deployment of main personal website with **very limited hardware** on private VPS.
- Relevant skills:** Linux, **site deployment and maintenance**.

Private LLM Inference Server

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

Git Server git.peisongxiao.com/peisongxiao

- Deployment of Gitea with limited hardware on private VPS and configured with **LLM pipeline** for external CI.
- Relevant skills:** Linux, **site deployment and maintenance**, **CI/CD**, automation.

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

Relevant Courses: Optimization, Network Flow Theory, Object-Oriented Software Development, Algorithms, Operating Systems, Numerical Computation, Data Structures, Computer Organization and Design, Logic and Computation, Statistics, Interpersonal Communication.