

Peisong Xiao

+1 (548)-255-5076 peisong.xiao.xps@gmail.com me@peisongxiao.com

Work Experiences [LinkedIn](#) [Personal Site](#) [Self-hosted Git Server](#) [Self-tuned ChatGPT](#)

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 new inference methods (wafer-based chips).
- 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**, IP routing, **teamwork**, **software design**.

Side Projects

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**.

THORN - Testing Harness for Observability and Regression in Networks ([Repo](#)) 07/2025 - Present

- Testing framework for ROSE integrating both simulation and bare-metal testing.
- System to configure, generate, and deploy tests for ROSE in a CI/CD fashion.
- Transferable skills: **Verilog/SystemVerilog**, Python, tool design, **hardware verification**, system design, CI.

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

- 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.

n8n Deployment n8n.peisongxiao.com

- Deployment of n8n and exposed via reverse proxy to the public network.
- Relevant skills: Linux, **site deployment and maintenance**, **reverse proxy**, task automation, **DevOps/MLOps**.

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** Present

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.