Daniel Liu

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Education

University of Toronto Sept 2020 - June 2025

B.A.Sc in Computer Engineering

- **3.89/4.00** Cumulative GPA and **87%** Cumulative Average
- AI Minor, NSERC Undergraduate Research Award recipient

Experience

Deep Learning Accelerator Engineer Aug 2025 - Present

Altera

- Designed and delivered an end-to-end simulation framework in Python, enabling customers to run inference on the encrypted accelerator's IP, released in v2026.1
- Implemented YOLOv8 support in the C++ runtime, upgrading legacy YOLOv3 inference
- Led the upgrade of the full stack from OpenVINO 2024.6.0 to 2025.4.0, spanning compiler integration and runtime changes in C++ and Python

Deep Learning Accelerator Engineering Intern January 2024 - August 2024

Altera

- Designed and implemented a centralized RTL configuration system across multiple hardware modules, validated via UVM and a cycle-accurate C++ model, reducing configuration update time by **50%**
- Productized the FPGA AI Suite C++ software model to enable hardware-free inference simulation, supporting training of **500+** FAEs and reducing customer lab dependency

Software Engineering Intern May 2023 - December 2023

Intel

- Developed an automated testing framework to enable engineers to test changes to the *OFS Project*; reduced manual testing by **95**%
- Integrated **100+** regression tests from oneAPI and OPAE-SDK into OFS CI pipelines, enabling nightly, weekly, and release validation
- Built automation tools with Python, SQL, and Excel supporting workforce planning, interview scheduling, budgeting, and internal data integration for a **700+** employee organization

Teaching Assistant January 2023 - January 2024

University of Toronto

- *Computer Fundamentals* and *Programming Fundamentals*: C/C++ language, Object Oriented Programming, data structures, algorithms, heuristics, complexity (**400** students)

ML Researcher Intern May 2022 - August 2022

iQua Research Group

- Extended federated learning framework *Plato* to support reinforcement learning workloads in PyTorch, running **100+** large-scale experiments contributing to a conference paper submission

Technical Skills

Languages/Tools: C++, C, Python, Golang, SQL, Perl, Bash, Verilog, ARM v7 Assembly, Modelsim, Git, Excel
Software/Hardware Courses: Algorithms & Data Structures, Operating Systems, Compilers, Distributed Systems, Computer Networking, Computer Organization, Digital Systems, Deep Learning, Machine Learning, Computational Intelligence, Computer Security, Databases

Publications

Cascade: Curriculum Federated Reinforcement Learning with Interference Avoidance IEEE FOGML 2024

*Salma Emara, **Daniel Liu**, Fei Wang, Baochun Li*

Lethe: Interference-Based Forgetting for Continual Learning Agents in Reinforcement Learning (Under Review)

*Salma Emara, Baochun Li, Tim Zeyl, **Daniel Liu***