

Leo Liu

Canadian Citizen

(778)990-6015 | leo@liuwork.ca | linkedin.com/in/leolinked | github.com/leowrites | cs.toronto.edu/ liu

EDUCATION

BSc Computer Science, University of Toronto

May 2026

GPA: 3.95/4.0

Dean's List

- **Courses:** Compilers & Interpreters, Research in ML Compiler with MLIR, Computer Architecture, Operating Systems, Parallel Programming, Data Structures and Algorithms, Computer Networks, Intro to ML, Databases
- **Interests:** High Performance Computing, Computer Systems, Backend

WORK EXPERIENCE

ParaMathics

Toronto, ON

Undergraduate Researcher

May 2025 – Present

- Contributed to 2:4 sparsity integration for OpenAI's Triton compiler, developing mixed-sparsity kernels and achieving up to 30% throughput at various sparsity levels compared to cuSPARSELt
- Extended Triton's autotuner to support preprocessing by modifying kernel argument handling and caching mechanisms, enabling optimal tile size discovery across varying sparsity levels and matrix dimensions
- Achieved up to 8% performance gains by optimizing kernels with autotuned configuration to address issues related to L2 cache utilization, also investigated tail effect and load imbalance

Mozilla

Toronto, ON

Software Engineer Intern

May 2025 – Present

- Engineered an Enhanced Tracking Protection flexibility option impacting over 1.5 million users, adding an reduce production feature to mitigate over 1,000+ site-breaking issues while maintaining privacy protection
- Responsible for implementing an infobar to notify existing users of the new flexibility option by working with cross-functional teams (Messaging Systems, UX and content)
- Accelerated diagnosis of web compatibility related issues by developing a devtool panel for QAs, introducing a new workflow increasing efficiency

Seismic

Toronto, ON

Software Engineer Intern

Sep 2024 – Dec 2024

- Worked as a part of Seismic LiveSocial. Delivered a highly requested full-stack feature giving admins greater access control over platform-specific content sharing, enhancing customization for over 2,000 client companies
- Transformed a client configuration update process to self-service, reducing configuration update time by 99% by migrating legacy configurations for 9 clients from file-based storage to MongoDB

Konrad

Toronto, ON

Software Development Intern

May 2024 – Aug 2024

- Owned the backend development of an internal employee gaming leaderboard, designing and implementing the core system architecture and SQL database schema
- Developed a daily data ingestion pipeline integrating 4 gaming platform APIs to automatically fetch and aggregate game statistics for over 500 employees, enabling real-time leaderboard functionality
- Optimized API efficiency by implementing GraphQL resolvers with Apollo Express, reducing complex nested query latency by 75% by eliminating request waterfalls.

Skytrac

Ottawa, ON

Software Development Intern

May 2023 – Aug 2023

- Reduced flight analysts' workflows by 15% by building a web dashboard with BackboneJS, automatically retrieving flight data from the MySQL database to allow efficient viewing and annotation of flight events
- Verified and identified inconsistent flight logs across 3 databases by implementing an automated tool that periodically ingests and evaluates data accuracy

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C, C++, SQL

Systems & Tools: Git, Linux/Unix, Slurm, Vim, LLVM/MLIR, Nsight Compute