

EDUCATION

SEPTEMBER 2022 – JUNE 2027 (EXPECTED)

UNIVERSITY OF TORONTO

Bachelor's in Applied Science (B.A.Sc.) in Computer Engineering + PEY Co-op

Awards: Dean's Honors List 2022-2023

Relevant courses: Algos & Data Structures, Fundamentals of Deep Learning, Machine Learning, Probability & Statistics, Linear Algebra, Matrix Algebra & Optimizations, Operating Systems, Digital Electronics & Systems, Computer Networks, Computer Architecture, Circuit Analysis, Quantum Algos & Computing Hardware, Economics & Analysis, Distributed Systems

MAY 2021 – JUNE 2022

ERIC HAMBER

SECONDARY

Average: 96%,

Student Council, Student

Mentorship

SEPTEMBER 2017 – MARCH 2020

CAMAS HIGH SCHOOL

GPA: 3.99 Unweighted, 4.74 Weighted,

AP Scholar with Distinction, Science Olympiad

State Champion, Knowledge Bowl Regional

Champion

SKILLS

Programming Languages: C++, Java, Python, ARM/Nios II Assembly

AI/ML: Pytorch, TensorFlow, Hugging Face, JAX, ONNX, vLLM

Compiler: Torch, XLA, MLIR, StableHLO, Shardy

Hardware/Circuit Design: Verilog/VHDL, ModelSim, FPGAs, SoCs

DevOps: GitHub Actions, Docker

Data science & Analysis: R/RStudio, MATLAB, NumPy, Matplotlib

Web Development: JavaScript, CSS, HTML, REACT, Next.js, PostgreSQL

Languages: English, Japanese, Spanish

EXPERIENCE

AI/ML Compiler Engineering Intern, Tenstorrent - Toronto, ON

MAY 2025 – PRESENT

Working on the MLIR based compiler for running Deep learning workloads on custom processors and accelerators.

- Built LLM performance benchmarking infrastructure for tt-xla, the compiler pathway integrating XLA (OpenXLA/Google TPU) with Tenstorrent hardware.
- Created custom test suites to validate SOTA models (gpt_oss, Kimi K2.5, DeepSeek, GLM, Stable Diffusion, Llama 3, Qwen, etc.) through the tt-mlir compiler, gaining expertise in various LLM architectures and attention mechanisms.
- Validated parallelism strategies like data, tensor, pipeline and expert (MoE) parallelism.
- Contributed to the development of BFP8 quantization and conversion logic within the compiler to improve hardware utilization and model execution efficiency.
- Helped develop our custom MoE interface to run SOTA models through our compiler.
- Optimized graph compilation workflows across Pytorch, JAX, and ONNX by leveraging knowledge of IRs like StableHLO and integration strategies for torch-mlir and OpenXLA.
- Developed test suites for distributed execution, using Shardy for tensor partitioning and SPMD, and info from Hugging Face to optimize how the compiler shards SOTA models across multiple accelerators.
- Uplifts for industry standard AI/ML libraries and interfaces like Pytorch, Hugging Face Transformers, and vLLM.
- Optimized compiler delivery, integration and testing by enhancing CI/CD pipelines, scaling Infrastructure as Code (IaC), and supporting automated, containerized deployments with Docker.

Co-Founder and CTO, DayDream Education - Toronto, ON

MAY 2024 – JAN 2025

Ed-tech startup focused on reducing smartphone usage among high school students by rewarding healthy habits.

- Secured selection into the NEST incubator of the Entrepreneurship Hatchery at the University of Toronto.
- Developed technical infra of platform using React Native/Swift and Django/Django REST API with PostgreSQL, leading Agile development of a pilot program for local private schools to track phone usage of students and reward healthier habits.
- Created a business plan through market research, customer discovery, and financial forecasting, and forged partnerships with local businesses to offer real-world incentives for students.

INTERN, Repel Security Systems Ltd. - Vancouver, BC

MAY 2023 – JULY 2023

Led the digital transformation of accounting systems to meet business and client needs.

- Digitized the accounting infrastructure for a custom home automation firm by transitioning six months of financial records into a customized QuickBooks system.
- Analyzed ~\$1M in financial data to identify historical accounting errors and design a tailored reporting structure.
- Consulted with leadership to audit business processes and provide necessary improvements, ensuring the new digital system aligned with specific client and operational needs.