

EDUCATION

University of Toronto 09/2021 – 04/2026
HBSc: Computer Science (AI) · 2× Dean's List · CGPA 3.85/4.00
Toronto, Canada

National University of Singapore 01/2024 – 05/2024
Semester Exchange Program
Singapore

Coursework: Deep Learning, Operating Systems, Data Structures, Systems Programming, Artificial Intelligence, Machine Learning, Computer Vision, Computational Probability & Statistics.

ACADEMIC RESEARCH

Machine Learning Researcher 12/2024 – 03/2025
The Matter Lab at UofT
Toronto, Canada

- Built a **PySCF** based workflow for a machine-learning exchange–correlation functional by extracting one & two-particle Reduced Density Matrices from **CCSD** calculations.
- Mapped orbitals to grids & derived the exchange–correlation hole h_{xc} from pair & electron densities.
- Added automated checks enforcing physical sum rules so the data stayed consistent with first-principles **DFT**.

LLM Robotics Researcher 08/2024 – 03/2025
MEDCVR at UofT
Toronto, Canada

- Designed a **multi-agent** robotics application with VLMs & LLMs for autonomous surgical tasks.
- Developed high-level motion planning, low-level action functions & deployed code on **Franka Emika** robot.

WORK EXPERIENCE


Machine Learning Intern 05/2025 – 08/2025
Autodesk
Toronto, Canada

- Built an **agentic chatbot** for software-package management that plans multi-step workflows (**create, edit, find, & delete**) & orchestrates cross-service tool calls, delivering **90%** action accuracy & **\$6.7M/year** projected customer savings at rollout.
- Implemented **RAG**-powered semantic search for find feature across **1000+** package configs with **10×** faster lookups.
- Added **JWT** feature flag to switch between hard-coded roles & **3-legged** token, enabling safe staged migration.

Software Engineering Intern 09/2024 – 04/2025
Thomson Reuters
Toronto, Canada

- Resolved **20** production issues & migrated **C#** backend services, improving platform stability by **15%**.
- Managed **monthly releases**, cherry-picking cross-functional changes, ensuring **98%** on-time delivery.
- Developed **25** SQL scripts to fix bugs & deliver features for **20,000** customers across seven environments.

Teaching Assistant 09/2024 – 04/2025
University of Toronto
Toronto, Canada

- TAed **CSC207 (Software Design)** & **CSC209 (Systems Programming)**; supported **500+** students through labs, grading, & office hours.
- Created **adventure game**  assignment for **CSC207** & test suite, reducing grading time by **50%**.

Software Engineering Intern 05/2024 – 08/2024
TD Bank
Toronto, Canada

- Built “Maintain Holiday” webpage for Registered Products Database using **Spring Boot** & **Angular**.
- Authored Selenium-based regression scripts, cutting test time by **500%** & providing **\$25,000/year** savings.

Software Engineering Intern 05/2023 – 08/2023
Nokia
Toronto, Canada

- Implemented & tested iSIM features in **Java**, enabling Airtel to monitor **100 million** users.
- Resolved **100** code issues & **7** critical security flaws, boosting performance & stability by **5%**.

SKILLS

Languages: Python, C#, Java, C, SQL, JavaScript

Frameworks: Spring Boot, .NET (Core), Angular

Tools: AWS, Git, Docker, Kubernetes, PostgreSQL, REST API, Selenium

Machine Learning: PyTorch, Scikit-learn, NumPy, OpenCV, RAG

PUBLICATIONS

- A. Agrawal, “From Attention to Application: The Evolution of Transformer Models & Their Impact on Modern Healthcare & Cancer Research,” submitted to *J. Mach. Learn. Res.*, 2025.

PROJECTS

Aegis - TreeHacks 2025 [🔗](#)

02/2025

- Built a **multimodal edge-ML system** using Apple Watch & Terra biometrics with NVIDIA Jetson—deployed **VILA models** to infer firefighters’ state & trigger **actuator-controlled medication**.

ReCall.ai - HackPrinceton 2024 Winner [🔗](#)

12/2024

- Built smart glasses that use **facial recognition** to identify conversation partners & **LLMs** to summarize past interactions with them. Won the **Patient Safety Challenge & Diagnosis Consort** among 100 teams.

Watchful.AI - PennApps XXV Hackathon Winner [🔗](#)

09/2024

- Developed an **AI safety system** using **CLIP**, **VLMs**, & a **vector database** to analyze CCTV feeds for weapon-related threats & alert campus security in real time. Won **Best Privacy/Security Hack & Most Technically Complex Hack** among 104 teams.

EXTRACURRICULARS & LEADERSHIP

Director of Sponsorship

05/2025 – Present

UofT AI [🔗](#)

Toronto, Canada

- Currently Lead a 20-member team to raise **CAD 40,000** in sponsorships for ConferenceX, Canada’s largest undergraduate AI conference.
- Managing outreach, mentoring members, & meeting with sponsors to negotiate & close sponsorship deals.

Competitive Programming

09/2025 – 11/2025

International Collegiate Programming Contest

Toronto, Canada

- Represented UofT at the **ICPC North America East Central Regional**.

Hackathon Judge & Mentor

05/2025 – 08/2025

Independent Judge & Mentor

Toronto, Canada

- Judged & mentored teams at Hack404 & **Ignition Hacks [🔗](#)**, guiding students on ML, system architecture, & their projects.

Founder & CEO

05/2025 – 08/2025

ClearSite.ai

Toronto, Canada

- Founded an accessibility startup & got selected for **CAD 150,000** in pre-seed funding at UofT’s Hatchery.
- Built tools that detect accessibility issues in websites & generate automated fixes.

Machine Learning Technical Writer

09/2024 – 04/2025

UofT Machine Intelligence Student Team [🔗](#)

Toronto, Canada

- Wrote & edited machine learning articles for the UofT ML community.

AWARDS

- University of Toronto International Scholar (CAD 180,000) - Awarded to top 3% international admits.
- University of Toronto Principal’s Entry (CAD 12,000) - Merit based academic award.
- University of Toronto Scholar (CAD 7,500) - Awarded to outstanding students upon admission.
- University of Toronto International Experience Award (CAD 6,000) - Funding for semester abroad at NUS.
- PennApps XXV - Best Privacy/Security Hack & Most Technically Complex Hack.
- HackPrinceton - Diagnosis Consort by BGB Group & Patient Safety Challenge.
- UofTHacks X - Co:Here Best Build with Cohere Challenge.
- DeerHacks - Best Usage of UiPath Products.