

## EDUCATION

<b>University of Toronto</b> <i>HBS: Computer Science (AI)</i> · 2× <i>Dean's List</i> · CGPA 3.85/4.00	09/2021 – 04/2026 Toronto, Canada
<b>National University of Singapore</b> <i>Semester Exchange Program</i>	01/2024 – 05/2024 Singapore
<b>Coursework:</b> Deep Learning, Operating Systems, Data Structures, Systems Programming, Artificial Intelligence, Machine Learning, Computer Vision, Computational Probability & Statistics.	

## ACADEMIC RESEARCH

<b>Machine Learning Researcher</b> <i>The Matter Lab at UofT</i>	12/2024 – 03/2025 Toronto, Canada
<ul style="list-style-type: none"><li>Built a <b>PySCF</b> based workflow for a machine-learning exchange–correlation functional by extracting one &amp; two-particle Reduced Density Matrices from <b>CCSD</b> calculations.</li><li>Mapped orbitals to grids &amp; derived the exchange-correlation hole <math>h_{xc}</math> from pair &amp; electron densities.</li><li>Added automated checks enforcing physical sum rules so the data stayed consistent with first-principles DFT.</li></ul>	

**LLM Robotics Researcher**  
*MEDCVR at UofT* 08/2024 – 03/2025  
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

<b>Machine Learning Intern</b> <i>Autodesk</i>	05/2025 – 08/2025 Toronto, Canada
<ul style="list-style-type: none"><li>Built an <b>agentic chatbot</b> for software-package management that plans multi-step workflows (<b>create, edit, find, &amp; delete</b>) &amp; orchestrates cross-service tool calls, delivering <b>90%</b> action accuracy &amp; <b>\$6.7M/year</b> projected customer savings at rollout.</li><li>Implemented <b>RAG</b>-powered semantic search for find feature across <b>1000+</b> package configs with <b>10×</b> faster lookups.</li><li>Added <b>JWT</b> feature flag to switch between hard-coded roles &amp; <b>3-legged</b> token, enabling safe staged migration.</li></ul>	
<b>Software Engineering Intern</b> <i>Thomson Reuters</i>	09/2024 – 04/2025 Toronto, Canada
<ul style="list-style-type: none"><li>Resolved <b>20</b> production issues &amp; migrated <b>C#</b> backend services, improving platform stability by <b>15%</b>.</li><li>Managed <b>monthly releases</b>, cherry-picking cross-functional changes, ensuring <b>98%</b> on-time delivery.</li><li>Developed <b>25</b> SQL scripts to fix bugs &amp; deliver features for <b>20,000</b> customers across seven environments.</li></ul>	
<b>Teaching Assistant</b> <i>University of Toronto</i>	09/2024 – 04/2025 Toronto, Canada
<ul style="list-style-type: none"><li>TAed <b>CSC207 (Software Design)</b> &amp; <b>CSC209 (Systems Programming)</b>; supported <b>500+</b> students through labs, grading, &amp; office hours.</li><li>Created <b>adventure game</b> ↗ assignment for <b>CSC207</b> &amp; test suite, reducing grading time by <b>50%</b>.</li></ul>	
<b>Software Engineering Intern</b> <i>TD Bank</i>	05/2024 – 08/2024 Toronto, Canada
<ul style="list-style-type: none"><li>Built “Maintain Holiday” webpage for Registered Products Database using <b>Spring Boot &amp; Angular</b>.</li><li>Authored Selenium-based regression scripts, cutting test time by <b>500%</b> &amp; providing <b>\$25,000/year</b> savings.</li></ul>	
<b>Software Engineering Intern</b> <i>Nokia</i>	05/2023 – 08/2023 Toronto, Canada
<ul style="list-style-type: none"><li>Implemented &amp; tested iSIM features in <b>Java</b>, enabling Airtel to monitor <b>100 million</b> users.</li><li>Resolved <b>100</b> code issues &amp; <b>7</b> critical security flaws, boosting performance &amp; stability by <b>5%</b>.</li></ul>	

## SKILLS

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**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

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- 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

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Aegis - TreeHacks 2025 ↗	02/2025
• Built a <b>multimodal edge-ML system</b> using Apple Watch & Terra biometrics with NVIDIA Jetson-deployed <b>VILA models</b> to infer firefighters' state & trigger <b>actuator-controlled medication</b> .	
ReCall.ai - HackPrinceton 2024 Winner ↗	12/2024
• Built smart glasses that use <b>facial recognition</b> to identify conversation partners & <b>LLMs</b> to summarize past interactions with them. Won the <b>Patient Safety Challenge &amp; Diagnosis Consort</b> among 100 teams.	
Watchful.AI - PennApps XXV Hackathon Winner ↗	09/2024
• Developed an <b>AI safety system</b> using <b>CLIP</b> , VLMs, & a <b>vector database</b> to analyze CCTV feeds for weapon-related threats & alert campus security in real time. Won <b>Best Privacy/Security Hack &amp; Most Technically Complex Hack</b> among 104 teams.	

## EXTRACURRICULARS & LEADERSHIP

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Director of Sponsorship <i>UofT AI</i> ↗	05/2025 – Present Toronto, Canada
• Currently Lead a 20-member team to raise <b>CAD 40,000</b> in sponsorships for ConferenceX, Canada's largest undergraduate AI conference.	
• Managing outreach, mentoring members, & meeting with sponsors to negotiate & close sponsorship deals.	
Competitive Programming <i>International Collegiate Programming Contest</i>	09/2025 – 11/2025 Toronto, Canada
• Represented UofT at the <b>ICPC North America East Central Regional</b> .	
Hackathon Judge & Mentor <i>Independent Judge &amp; Mentor</i>	05/2025 – 08/2025 Toronto, Canada
• Judged & mentored teams at Hack404 & <b>Ignition Hacks</b> ↗, guiding students on ML, system architecture, & their projects.	
Founder & CEO <i>ClearSite.ai</i>	05/2025 – 08/2025 Toronto, Canada
• Founded an accessibility startup & got selected for <b>CAD 150,000</b> in pre-seed funding at UofT's Hatchery.	
• Built tools that detect accessibility issues in websites & generate automated fixes.	
Machine Learning Technical Writer <i>UofT Machine Intelligence Student Team</i> ↗	09/2024 – 04/2025 Toronto, Canada
• Wrote & edited machine learning articles for the UofT ML community.	

## AWARDS

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- 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.