SARINA XI

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EDUCATION

Carnegie Mellon University **Pittsburgh, PA**
- MS in Machine Learning *December 2025*

University of Toronto **Toronto, Canada**
- Honours BASc in Engineering Physics, double minor in Artificial Intelligence, Robotics & Mechatronics *June 2024*

RELEVANT EXPERIENCE

Carnegie Mellon University **Pittsburgh, PA**
ML Student Researcher | Supervised by Prof. Nihar B. Shah *September 2024 - Present*
- *LLM Benchmark for Error Identification in Papers*
  - Leading the development of an automated dynamic benchmark to evaluate LLMs' ability to detect core conceptual errors in long-context academic papers, enabling their use as tools to assist human peer reviewers.
- *Algorithmic vs Human Judge Assignment*
  - Developed HLSE, an ensemble model combining TF-IDF and transformer embeddings to compute similarity scores for the judge assignment problem.
  - Demonstrated human-level performance through a direct empirical comparison with 309 human expert matched judge-venture pairs at the 2025 Harvard President's Innovation Challenge.
  - Reduced assignment time from one week to several hours, enabling scalable, high-quality innovation assessment.

Corvic AI **Mountain View, CA**
Machine Learning Engineer Intern *May 2025 - August 2025*
- Designed and implemented end-to-end context preservation for segmented documents, boosting downstream graph-based inference and entity linking accuracy by ~12%.
- Modularized data processing pipelines for unstructured data, improving deployment scalability through enhanced resource utilization.
- Integrated web crawling into the data ingestion pipeline to enable support for autonomous, scalable data collection.

The Toronto Systems Security Lab **Toronto, Canada**
ML Student Researcher | Supervised by Prof. David Lie *June 2023 - May 2024*
- Developed and evaluated privacy-preserving NLP pipelines using local differential privacy, knowledge distillation, and active learning, optimizing the trade-off between utility and privacy for real-world deployment.
- Benchmarked with transformers and LSTMs, demonstrating performance gains over baselines in noisy conditions.

RBC Capital Markets **Toronto, Canada**
AI Engineer Intern | Digital Solutions and Client Insights Team *May 2022 - April 2023*
- Optimized the input feature set and reduced input dimensionality by 3% for Aiden, a production-grade RL trading algorithm, enhancing signal quality and system efficiency.
- Developed automated tools for feature importance analysis from large-scale SQL data, increasing model explainability and auditability in high-stakes financial environments.
- Enhanced the goal-conditioned multi-objective RL architecture, doubling learning speed via reward structure tuning and feature engineering, and improving adaptability across market regimes.

HONORS/AWARDS

University of Toronto Student Leadership Award | *University of Toronto* *2024*
- Awarded as recognition for outstanding student leadership, volunteer service, and commitment to the university.

Joseph F. Goetz Engineering Scholarship ($3240) | *University of Toronto* *2023*
- Awarded on the basis of academic merit and demonstrated leadership involvement with Skule Music and/or University of Toronto Engineering Industry/Professional Development Clubs.

Eric Miglin Scholarship ($2910.24) | *University of Toronto* *2022*

- Awarded on the basis of financial need, academic standing, and active involvement in student and/or University government.

Undergraduate Student Research Award ($6000) | *Natural Science and Engineering Research Council of Canada* *2021*
- Awarded for summer research on the development of COVID rapid lateral flow strips with Prof. Xinyu Liu.

Engineering Science Research Opportunity Award ($3000) | *University of Toronto* *2020*
- Awarded for summer research on the development of a solid-state atomic clock with Prof. Amar Vutha.

Dean's Merit Award ($2000) | *University of Toronto* *2019*
- Awarded on the basis of academic merit.

LEADERSHIP/COMMUNITY INVOLVEMENT

WISE Mentor **University of Toronto**
Women in Science and Engineering *2025 - 2026*
- Providing mentorship to undergraduates, offering guidance on academic success, career planning, and research.

Admissions Committee Member **Carnegie Mellon University**
MSML Admissions Committee *2024 - 2025*
- Served on the Master's in Machine Learning admissions committee, reviewing and assessing applicant profiles.

VP Student Life **University of Toronto**
Engineering Science Club *2023 - 2024*
- Planned and managed student life events, including cross-year mixers, wellness initiatives, and talent shows, for the Engineering Science program, fostering community engagement and supporting students' well-being across all years.

Co-General Manager/Treasurer **University of Toronto**
Iron Dragons *2021 - 2024*
- Directed an executive team of 6 - 8 for the Engineering Dragon Boat Team.
- Rebuilt and expanded the team from one mixed crew to two competitive and one recreational crew within a year through strategic recruitment and training initiatives in collaboration with coaches and the management team; both competitive crews medalled at multiple events at the 2024 Club Crew World Championships.

Co-Director **University of Toronto**
Appassionata Music Group *2021 - 2024*
- Planned and led community concerts at Hart House and charity events at retirement homes, showcasing student and alumni musicians and engaging over 100 performers and attendees.

VP Learning **University of Toronto**
Trustworthy Machine Intelligence *2021 - 2023*
- Organized and facilitated educational events, including seminars, workshops, and guest speaker events, on AI ethics to make the field more accessible to students.