Richard Shi

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Education

University of Toronto Toronto, ON

MSc in Applied Computing, AI Concentration *Sep 2025–Dec 2026 (expected)*

- Relevant Coursework: Deep Learning: Theory & Data Science, Topics in Machine Learning: Introduction to Causality, State Estimation for Aerospace Vehicles, Visual and Mobile Computing Systems

University of Toronto Toronto, ON

HBSc with High Distinction, Computer Science Specialist and Mathematics Minor *Sep 2021–Apr 2025*

- Relevant Coursework: Nonlinear Optimization, Introduction to Artificial Intelligence, Introduction to Machine Learning, Introduction to Image Understanding, Natural Language Computing, Neural Networks & Deep Learning

Experience

Mathematics Teaching Assistant Toronto, ON

Department of Mathematics, University of Toronto *Sep 2023–Apr 2024, Sep 2024–Apr 2025, Sep 2025–Present*

- Supported overall 200+ students across both single and multivariable theoretical calculus courses through office hours and monitoring online discussion forums
- Led weekly tutorial sessions for a combined 100 students by facilitating group work and discussions
- Efficiently graded 1000+ submissions per assessment and gave detailed feedback to improve student performance

Computer Science Teaching Assistant Toronto, ON

Department of Computer Science, University of Toronto *Sep 2025–Present*

- Assisted instructors in assessment preparation by giving feedback improve the student learning experience
- Led weekly labs for a total of 50 students by monitoring the completion of weekly quizzes
- Supported students during office hours by helping with coding in Python or explaining coding concepts

Undergraduate Machine Learning Research Assistant Toronto, ON

SysNet Research Group, University of Toronto *May 2024–Sep 2024*

- Devised a solution to address privacy and performance concerns of federated learning and bottlenecked devices
- Conducted experiments with Python and Flower, a federated learning framework, to quantify the effects of our solution on devices subject to computational and network bottlenecks
- Created and delivered a presentation at the University of Toronto's Department of Computer Science Summer Research Poster Showcase

Software Developer Toronto, ON

Students Developing Software Team, University of Toronto *Jan 2023–Sep 2023*

- Contributed to an open-source static code analysis tool called PythonTA through the development of educational features such as visualization of control flow graphs and custom code checkers using Python, Pylint, and astroid
- Maintained codebase through updating documentation, bug fixes, and improving readability for error messages
- Utilized advanced Git features to complete 25 tasks over two semesters

Awards

Dean's List Scholar 2022–2025

University of Toronto Excellence Award 2024

President's Scholar of Excellence 2021