Dorsa Molaverdikhani

Toronto, ON | dorsa.molaverdikhani@mail.utoronto.ca | dorsa-molaverdikhani.github.io

EDUCATION

University of Toronto — Toronto, ON
Honours Bachelor of Science, Computer Science Specialist, Math Minor — *Sep. 2020 – June 2025*

Cumulative GPA: 3.95/4.00

Research Advisors: David Lindell, Kyros Kutulakos, Nandita Vijaykumar

Relevant Coursework: Introduction to Machine Learning, Introduction to Image Understanding, Introduction to Visual Computing, Computer Graphics, Neural Networks and Deep Learning, Data Structures & Analysis, Multivariable Calculus with Proofs, Algorithm Design & Analysis, Probabilistic Learning & Reasoning, Linear Algebra I & II

RESEARCH & WORK EXPERIENCE

Research Assistant — May 2024 – Present
Embarc Research Group, Department of Computer Science, University of Toronto — *Toronto, ON*
- Conducting research with the Embarc Research Group, focusing on accelerating neural scene reconstruction for low-light burst captures.
- Running experiments on baseline models and building a dataset of low-light burst images to support the evaluation and enhancement of neural scene reconstruction in challenging lighting conditions.

Student Researcher — May 2023 – May 2024
Toronto Computational Imaging Group, Department of Computer Science, University of Toronto — *Toronto, ON*
- Designed and implemented a deep generative model to create realistic 3D urban scenes, summarizing the results and findings in a detailed technical report.
- Performed comprehensive experiments with 3D generative models using the KITTI-360 and Waymo datasets, evaluating their capabilities and limitations.

Research Assistant — Jan. 2023 – Apr. 2023
Toronto Computational Imaging Group, Department of Computer Science, University of Toronto — *Toronto, ON*
- Collaborated in a team of 2 to implement and train machine learning models capable of reconstructing videos at full spatial and temporal resolution from coded measurements.
- Conducted a thorough comparative analysis of machine learning-based techniques for video compressive sensing on videos captured by coded-exposure pixel sensors.

Content Developer — May 2021 – July 2021
Department of Computer Science, University of Toronto — *Toronto, ON*
- Designed over 100 programming and comprehension practice questions for first-year computer science courses.

TEACHING EXPERIENCE

Teaching Assistant - MAT135: Calculus I — Sep. 2024 – Dec. 2024
Mathematics Department, University of Toronto — *Toronto, ON*
- Graded assignments and tests, held office hours, invigilated exams, led tutorial sessions, and collaborated with the professor during lectures by answering questions and facilitating discussions.

Teaching Assistant - Math Learning Center — Sep. 2021 – Dec. 2021
Mathematics Department, University of Toronto — *Toronto, ON*
- Assisted over 200 first-year students with math questions during 40 office hours across 12 weeks.

HONORS & AWARDS

Dean's List Scholar, University of Toronto	2024, 2023, 2021
Department of Computer Science Research Award, University of Toronto	2024
Innis College Exceptional Achievement Award, University of Toronto	2024, 2023
University of Toronto In-course Scholarship, University of Toronto	2021
Later Life Learning Scholarship, University of Toronto	2021
Dr. Babak Farzad's Award of Leadership, University of Toronto	2020
University of Toronto Scholar, University of Toronto	2020

Technical Skills

Languages: Python, Java, C, C++, R, Bash, SQL

Frameworks: PyTorch

Developer Tools: Git, VS Code, PyCharm, IntelliJ, Vim

Libraries: OpenCV, OpenGL, Pandas, NumPy, Matplotlib, Scikit-learn, SciPy