MOHAMMAD MOZAFFARI

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EDUCATION

University of Toronto, Toronto, Canada *Sep 2021 - Present*
Ph.D., Computer Science

University of Tehran, Tehran, Iran *Sep 2017 - Jul 2021*
B.Sc., Electrical Engineering. GPA: 4.0/4.0 (19.26 / 20)
Minor in Computer Engineering. GPA: 4.0/4.0 (18.14 / 20)

SKILLS

Programming Languages:	Python, C, C++17, MATLAB, CUDA
Programming Models:	OpenMP, PThreads, MPI
	Object Oriented Programming
Frameworks & Tools:	PyTorch, NVIDIA-Nsight System/Compute, Git

PUBLICATIONS

- <u>M. Mozaffari</u>, S. Li, Z. Zhang, and M. Mehri Dehnavi. MKOR: Momentum-Enabled Kronecker-Factor-Based Optimizer Using Rank-1 Updates. Accepted at *Thirty-seventh Conference on Neural Information Processing Systems, **Neurips***, 2023.

EXPERIENCE

Research Intern at Autodesk *Aug 2022 - December 2022*
- **Supervisor:** Massimiliano Meneghin
- **Goals:** Accelerated a multi-GPU system (in CUDA) for scientific computing by profiling the code and detecting and utilizing possible fusion cases in the system.
- **Skills:** Multi-GPU Programming, CUDA Profiling using NVIDIA-Nsight System/Compute

Research Intern at the University of Tehran *Aug 2020 - Jul 2021*
- **Supervisor:** *Professor Maryam Sabbaghiyan*
- **Goals:** Enhanced data transfer rates among users by discerning spatial-time variations in user behavior through the development of a mathematical model and an associated simulator. Employed machine learning methods and convex optimization techniques to optimize bandwidth utilization.
- **Skills:** Python, Multi-thread Programming, Convex Optimization

ACADEMIC PROJECTS

Accelerating N-Body Problems Using Domain Decomposition - C++, OpenMP, MPI
Particle Based Fluid Simulation - MATLAB
Stable Fluids - Python

HONORS

- Ranked **first** among 114 undergraduate students of electrical engineering at the Univerisy of Tehran.
- Won the **Top Rank Certification at Faculty of Engineering (FOE)** at the University of Tehran in 2018-2019.

TEACHING EXPERIENCE

University of Toronto: Foundations of Computer Science I, Data Structures and Analysis, Intro to Theory of Computation, CS Help Centre
University of Tehran: Electrical Circuits I & Lab, Engineering Mathematics, Signals and Systems, Physics I