

Mehdi Safaee

Researcher at Simon Fraser University
GrUVi (Graphics+Vision) Lab

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Education

- Simon Fraser University** Burnaby, Canada
• *M.Sc. (Thesis) in Computer Science (GPA: 4.09/4.33)* 2022 - 2024
- Amirkabir University of Technology (Tehran Polytechnic)** Tehran, Iran
• *B.Sc. in Computer Engineering* 2013 - 2019
- Amirkabir University of Technology (Tehran Polytechnic)** Tehran, Iran
• *Minor in Electrical Engineering* 2013 - 2019

Honors

Ranked 1st in Iranian National Artificial Intelligence Contest (Rahneshan) (≈ 500 students) 2018
Among top 10% of students of AUT Computer Engineering faculty (≈ 90 students) . 2015 – 2019
Ranked 1st among all the students of Ghalam high-school (≈ 60 students) 2009 – 2012
Semi-finalist at mathematics, physics and astrology olympiads in high-school 2011

Publications

- M. Safaee, A. Mahdavi-Amiri; *Attention Guidance in Diffusion Models*. M.Sc. Thesis in Computer Science, Simon Fraser University, Burnaby, Spring 2024.
- M. Safaee, A. Mikaeili, O. Patashnik, D. Cohen-Or, A. Mahdavi-Amiri; *CLiC: Concept Learning in Context*. Arxiv Preprint submitted to CVPR, 2024.
- A. Mikaeili, O. Perel, M. Safaee, D. Cohen-Or, A. Mahdavi-Amiri; *SKED: Sketch-Based Text-Guided 3D Editing*. Presented at ICCV, 2023.
- M. Safaee, M. Sedighi; *Realtime Implementation and RTL Acceleration of Deep Q-Learning Algorithm for Designing an Intelligent Path-finding Agent*. B.Sc. Thesis in Computer Engineering, Amirkabir University of Technology, Tehran, October 2019.

Selected Courses

Diffusion Models (SFU)	(A)	Probabilities and Statistics (AUT) . . .	(A+)
Neural 3D Modeling (SFU)	(A+)	Fundamentals of Programming (AUT)	(A+)
Reinforcement Learning (SFU)	(A-)	Advanced Programming (AUT)	(A+)
Generative Models (SFU)	(A+)	Data Structures and Algorithms (AUT)	(A)
Geometric Modeling (SFU)	(A)	Parallel Processing (AUT)	(B+)
Computer Vision (SFU)	(A+)	Linear Control (AUT)	(A+)
Technical Writing (SFU)	(A)	Signals and Systems (AUT)	(A)
Neural Networks (AUT)	(A+)	Digital Signal Processing (AUT)	(PASS)
Artificial Intelligence (AUT)	(A)	Computer Architecture (AUT)	(A)
Machine Learning (AUT)	(PASS)	Embedded Systems (AUT)	(A+)

Experiences

- GrUVi (Graphics+Vision) Lab (Simon Fraser University)**
Applied AI Researcher
 - Under the supervision of Prof. Ali Mahdavi-Amiri
 - Researched customization of attention mechanism in diffusion models

Burnaby, Canada
Jan. 2022 - Present
- Matt3r Technologies Inc.**
Part-Time Computer Vision Software Engineer
 - Under the supervision of Amir Saheb (Chief Data Scientist)
 - Developed various industrial-grade autonomous driving solutions

Vancouver, Canada
Apr. 2022 - Aug. 2023
- Farand Systems**
Robotics Software Engineer
 - Under the supervision of Afshin Navabi (CTO)
 - Developed various industrial-grade robotics and autonomy solutions

Tehran, Iran
Dec. 2019 - Dec. 2021
- Institute for Cognitive Science Studies (Internship)**
Signal Processing Engineer in Neural Data Acquisition Lab
 - Under the supervision of Prof. Mohsen Pedram
 - Implemented data-driven approaches for fNIRS neural data processing

Pardis, Iran
June. 2017 - Sept. 2017

Teaching

Head Teaching Assistant for Visual Computing 2 Course	Spring 2024
Head Teaching Assistant for Visual Computing 1 Course	Fall 2023
Head Teaching Assistant for Computational Data Science Course	Summer 2023
Head Teaching Assistant for Visual Computing 2 Course	Spring 2023
Head Teaching Assistant for Visual Computing 1 Course	Fall 2022
Head Teaching Assistant for Visual Computing 2 Course	Spring 2022
Head Teaching Assistant for Neural Networks Course	Spring 2020
Lecturer for Fundamentals of Reinforcement Learning Workshop	Summer 2019
Lecturer for Fundamentals of Image Processing Workshop	Summer 2019
Head Teaching Assistant for Artificial Intelligence Course	Spring 2019
Head Teaching Assistant for Signals and Systems Course	Spring 2019
Head Teaching Assistant for MicroProcessors Design Course	Spring 2029
Lecturer for Fundamentals of Tensorflow Workshop	Fall 2018
Teaching Assistant for Data Mining Course	Fall 2018
Teaching Assistant for Artificial Intelligence Course	Fall 2018
Teaching Assistant for Signals and Systems Course	Fall 2018
Teaching Assistant for Microprocessors Design Course	Fall 2018
Teaching Assistant for Signals and Systems Course	Fall 2017
Teaching Assistant for Microprocessors Design Course	Fall 2017
Head Teaching Assistant for Electronic Circuits Course	Spring 2017
Head Teaching Assistant for Advanced Engineering Mathematics Course	Fall 2016
Teaching Assistant for Electronic Circuits Course	Spring 2016
Teaching Assistant for Logic Circuits Course	Fall 2015