Mehdi Safaee

Research assistant at Simon Fraser University — mehdi0xc@gmail.com
GrUVi (Graphics+Vision) Lab — mehdi0xc.github.io

Education

- **Simon Fraser University** — Burnaby, Canada
  M.Sc. (Thesis) in Computer Science — *2022 - 2024*
  - Total GPA: 4.09/4.33
  - Thesis: Attention Guidance in Diffusion Models
- **Amirkabir University of Technology (Tehran Polytechnic)** — Tehran, Iran
  B.Sc. in Computer Engineering — *2013 - 2019*
  - Total GPA: 16.47/20
  - Thesis: Hardware-Accelerated Q-Learning for Robotics
  - Extra minor in Electrical Engineering
- **Ghalam Private High-School** — Tehran, Iran
  Diploma of Mathematics — *2009 - 2013*
  - Total GPA: 19.32/20

Honors and Awards

Among top 10% of students of Computer Engineering faculty (≈ 90 *students*) . . . . . 2015 – 2019
Ranked 1st among all the students of high-school (≈ 60 *students*) . . . . . 2009 – 2012
Semi-finalist at mathematics, physics and astrology olympiads in high-school 2011

Publications

1. M. Safaee, A. Mikaeili, O. Patashnik, D. Cohen-Or, A. Mahdavi-Amiri; *CLiC: Concept Learning in Context*. Preprint submitted to CVPR2024, Arxiv.
2. A. Mikaeili, O. Perel, M. Safaee, D. Cohen-Or, A. Mahdavi-Amiri; *SKED: Sketch-Based Text-Guided 3D Editing*. Presented at ICCV, 2023.
3. 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

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

Experience

- **GrUVi (Graphics+Vision) Lab (Simon Fraser University)** — Burnaby, Canada
  Researcher in — *Spring 2022 - Current*
  - Under the supervision of Prof. A. Mahdavi-Amiri
  - Researched customization of attention mechanism in diffusion models for various applications
- **Matt3r Inc.** — Vancouver, Canada
  Part-Time Computer Vision Engineer — *April 2022 - Current*
  - Under the supervision of Amir Saheb
  - Developed various industrial-grade autonomous driving solutions
- **Farand Systems** — Iran, Tehran
  Computer Vision Engineer — *June 2021 - September 2022*
  - Under the supervision of Afshin Navabi
  - Developed various industrial-grade autonomous robotic solutions
- **Computational Intelligence Lab (Amirkabir University)** — Tehran, Iran
  Research Assistant in Applied Robotics — *Summer 2019 - Current*
  - Under the supervision of Prof. M. B. Menhaj
  - Studied and implemented various cutting-edge reinforcement learning algorithms
- **Institute for Cognitive Science Studies (Internship)** — Pardis, Iran
  Research Assistant in Neural Data Acquisition Lab — *Summer 2017-Summer 2018*
  - Under the supervision of Dr. M. Pedram
  - Implemented signal processing methods for fNIRS neural data processing

Teaching Experience

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