

Mohammadreza Mofayezi

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Education

University of Toronto

Ph.D. in Computer Science

- **Advisor:** Prof. Nandita Vijaykumar

Ontario, Canada

Sep. 2024 - Current

Sharif University of Technology

B.Sc. in Computer Engineering

- **Advisor:** Dr. Ehsaneddin Asgari

Tehran, Iran

Sep. 2019 - Jan. 2024

Publications

- [Mohammadreza Mofayezi](#) and Yasamin Medghalchi. Benchmarking robustness to text-guided corruptions. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2023*
- Saeed Saadatnejad, Ali Rasekh, [Mohammadreza Mofayezi](#), Yasamin Medghalchi, Sara Rajabzadeh, Taylor Mordan, and Alexandre Alahi. A generic diffusion-based approach for 3d human pose prediction in the wild. In *International Conference on Robotics and Automation (ICRA), 2023*

Preprints

- [Mohammadreza Mofayezi](#), Reza Alipour, Mohammad Ali Kakavand, Ehsaneddin Asgari. M³Face: A Unified Multi-Modal Multilingual Framework for Human Face Generation and Editing. *preprint, 2024*

Research & Work Experiences

Sharif University of Technology (SUT)

Bachelor Project Under the Supervision of Dr. Ehsaneddin Asgari

- Worked on multi-modal multilingual human face generation and editing.
- Introduced a framework for generating and editing face images through facial landmarks and semantic segmentation.
- Proposed a large-scale multi-modal multilingual face dataset with more than 150K images.

Tehran, Iran

July 2023 - Feb. 2024

Max Planck Institute for Informatics (MPII)

Undergraduate Research Assistant Under the Supervision of Prof. Adam Kortylewski | GVRL Lab

- Proposed a novel benchmark for evaluating the robustness of image classifiers to text-guided corruptions.
- Introduced a set of hand-engineered prompts for each ImageNet sub-class to generate better image manipulations.
- The work resulted in a paper accepted at the CVPR 2023 Workshop on Generative Models for Computer Vision.

Remote

Dec. 2022 - Mar. 2023

École polytechnique fédérale de Lausanne (EPFL)

Undergraduate Research Assistant Under the Supervision of Prof. Alexandre Alahi | VITA Lab

- Formulated the task of human motion synthesis with a diffusion process that starts from a Gaussian noise and generates a human pose.
- Proposed a novel generative diffusion model for human motion reconstruction and prediction from incomplete and noisy data.
- Conducted experiments on different aspects of the model, such as the diversity of the generated motion and its accuracy.
- The work resulted in a paper accepted at ICRA 2023 and NeurIPS 2022 Workshop on Score-Based Methods.

Remote

Oct. 2021 - July 2022

MadLlama Game Studio

Augmented Reality Developer

- Worked on Mobile AR Games with ARCore, ARKit, and Unity and published two games to the App Store.
- Developed a fully automated system for generating a Japanese-style environment for the Remortal game.
- Implemented an optimized road mesh generation tool with the ability to compress or decompress the mesh.

Tehran, Iran

Oct. 2020 - Jan. 2022

Research Interests

Computer Vision

- Representation Learning
- Generative Models

Machine Learning

- Efficient and Safe ML
- Robust Learning and Fairness

Voluntary Teaching Experiences

Artificial Intelligence , Instructor: Prof. Rohban and Soleymani Head TA of the course (S2023, F2023). Designed and graded assignments (S2022 and F2022).	Spring 2022 - Fall 2023
Probability and Statistics , Instructor: Prof. Sharifi-Zarchi Designed and graded assignments, quiz and created educational materials.	Fall 2021
Data Structures and Algorithms , Instructor: Prof. Safarnejad Designed and graded assignments.	Fall 2021
Fundamentals of Programming (C, C++) , Instructor: Prof. Fazli and Fakouri Designed and graded assignments. Created reading materials.	Fall 2020, Fall 2021

Academic Service

Reviewer at WACV, BMVC, ICML, and ECCV Reviewed paper for WACV'25, BMVC'24, SPIGM@ICML'24, SPIGM@ICML'23, WiCV@ECCV'24.	Online June 2023 - Current
Machine Learning Challenge (MLC) Organized the first Machine Learning Challenge in AI course of Sharif University of Technology.	Tehran, Iran June 2023
Made in Lobby 2021 Created technical content about Unity Engine for the Game Design Workshop at Made in Lobby.	Tehran, Iran Summer 2021
Gamein 2020 Contest As a member of the Technical Staff, developed a large-scale multiplayer game with Unity3D and C#	Tehran, Iran Summer 2020 - Fall 2020

Notable Projects

RobuText CVPRW 2023 • Official implementation of "Benchmarking Robustness to Text-Guided Corruptions". GitHub Link	MPII, Germany Spring 2023
DePOsit ICRA 2023 • Official implementation of "A generic diffusion-based approach for 3D human pose prediction in the wild". GitHub Link	EPFL, Switzerland Fall 2022
Breast Cancer Survival Prediction Machine Learning Course, Prof. Sharif-Zarchi • Implemented different ML models for breast cancer survival prediction. GitHub Link	Tehran, Iran Spring 2023
Hand Gesture Detection Hardware Lab Course, Prof. Ejlali • Developed a hand gesture detection system on Raspberry Pi. GitHub Link	Tehran, Iran Spring 2023
WeTube Computer Networks Course, Prof. Jafari • Developed an online streaming app with Django framework. GitHub Link	Tehran, Iran Spring 2022

Honors and Awards

- 2019 **Winner**, 2nd Team in Spaghetti Code Contest
- 2019 **Award**, Scholarship Award of National Elites Foundation
- 2019 **Top 20**, University Entrance Exam; 1st rank among more than 50k students, 15th among 250k students

Skills

Programming	Python, C#, C/C++, Java, R, SQL.
Machine Learning Tools	PyTorch, Tensorflow, NumPy, Pandas, Scikit-learn, Matplotlib.
Game Engine	Unity for Game and Cinematic.
Data Management & Databases	PostgreSQL, MySQL, MongoDB, Redis.
Graphical Design Tools	CorelDraw, Adobe Photoshop, Adobe Illustrator.
Frameworks & Programming Knowledge	Spring Framework, Rest API, WebSocket.
Miscellaneous	Linux, \LaTeX , Microsoft Office, Git.

Languages

English

TOEFL iBT 109 (R29, L27, S27, W26)

Persian

Native proficiency

German

Elementary proficiency