Mohammadreza Mofayezi

(+98) 913 708 8691 | marmofayezi@gmail.com | mofayezi.me | ckoorosh | marmofayezi

Education

Sharif University of Technology *Tehran, Iran*

Bachelor of Science in Computer Engineering *Sep. 2019 - Dec. 2023 (Expected)*

- **GPA:** 18.39/20.0 (Major: 18.69/20.0 | Last Year: 19.01/20.0)
- **Selected Courses:** Artificial Intelligence | Machine Learning | Modern Information Retrieval | Bioinformatics | Linear Algebra | Probability and Statistics | Design of Algorithms | Signals & Systems | Advanced Programming
- **Online Courses:** CS231n: Convolutional Neural Networks for Visual Recognition - Stanford University | Fundamentals of Reinforcement Learning - University of Alberta (Coursera certification)

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

Research & Work Experiences

Sharif University of Technology (SUT) *Tehran, Iran*

Bachelor Project Under the Supervision of Dr. Ehsaneddin Asgari *July 2023 - Current*

- Working on efficient methods for text-guided human face manipulation.
- Implementing a framework for editing faces through facial landmarks and semantic segmentation.
- Creating a large-scale multi-modal face dataset with more than 200K images.

Max Planck Institute for Informatics (MPII) *Remote*

Undergraduate Research Assistant Under the Supervision of Prof. Adam Kortylewski | GVRL Lab *Dec. 2022 - Mar. 2023*

- 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 more meaningful images.
- The work resulted in a paper accepted at the CVPR 2023 Workshop on Generative Models for Computer Vision.

École polytechnique fédérale de Lausanne (EPFL) *Remote*

Undergraduate Research Assistant Under the Supervision of Prof. Alexandre Alahi | VITA Lab *Oct. 2021 - July 2022*

- 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.

MadLlama *Tehran, Iran*

Augmented Reality Developer *Oct. 2020 - Jan. 2022*

- Worked on Mobile AR Games with ARCore, ARKit, and Unity.
- 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.
- Published two games to the App Store.

Research Interests

Computer Vision

- Representation Learning
- Generative Models

Natural Language Processing

- Multi-Modal Learning
- Vision-Language Reasoning

Machine Learning

- Trustworthy and Safe ML
- Robust Learning and Fairness

Voluntary Teaching Experiences

Artificial Intelligence, Instructor: Prof. Rohban and Soleymani *Spring 2022 - Fall 2023*

Head TA of the course (S2023, F2023). Designed and graded assignments (S2022 and F2022).

Probability and Statistics, Instructor: Prof. Sharifi-Zarchi *Fall 2021*

Designed and graded assignments, quiz and created educational materials.

Data Structures and Algorithms, Instructor: Prof. Safarnejad — *Fall 2021*
Designed and graded assignments.

Fundamentals of Programming (C, C++), Instructor: Prof. Fazli and Fakouri — *Fall 2020, Fall 2021*
Designed and graded assignments. Created reading materials.

Other Experiences

Machine Learning Challenge (MLC) — *Tehran, Iran*
Organized the first Machine Learning Challenge in AI course of Sharif University of Technology. — *June 2023*

Reviewer at ICML 2023 — *Online*
Reviewed paper for ICML 2023 Workshop on Structured Probabilistic Inference & Generative Modeling — *June 2023*

Made in Lobby 2021 — *Tehran, Iran*
Created technical content about Unity Engine for the Game Design Workshop at Made in Lobby. — *Summer 2021*

Gamein 2020 Contest — *Tehran, Iran*
As a member of the Technical Staff, developed a large-scale multiplayer game with Unity3D and C# — *Summer 2020 - Fall 2020*

Notable Projects

RobuText — *MPII, Germany*
CVPRW 2023 — *Spring 2023*
- Official implementation of "Benchmarking Robustness to Text-Guided Corruptions". GitHub Link

DePOSit — *EPFL, Switzerland*
ICRA 2023 — *Fall 2022*
- Official implementation of "A generic diffusion-based approach for 3D human pose prediction in the wild". GitHub Link

Breast Cancer Survival Prediction — *Tehran, Iran*
Machine Learning Course, *Prof. Sharif-Zarchi* — *Spring 2023*
- Implemented different ML models for breast cancer survival prediction. GitHub Link

Hand Gesture Detection — *Tehran, Iran*
Hardware Lab Course, *Prof. Ejlali* — *Spring 2023*
- Developed a hand gesture detection system on Raspberry Pi. GitHub Link

WeTube — *Tehran, Iran*
Computer Networks Course, *Prof. Jafari* — *Spring 2022*
- Developed an online streaming app with Django framework. GitHub Link

Honors and Awards

2019 **Winner**, 2nd Team in Spaghetti Code Contest
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

References

Prof. Alexandre Alahi
École polytechnique fédérale de Lausanne (EPFL Switzerland)
Email: alexandre.alahi@epfl.ch **Webpage**: people.epfl.ch/alexandre.alahi

Prof. Adam Kortylewski
Max Planck Institute for Informatics (MPII Germany)
Email: akortyle@mpi-inf.mpg.de **Webpage**: gvrl.mpi-inf.mpg.de

Dr. Ehsaneddin Asgari
Volkswagen Group AI Expert Center at Data:Lab
Email: asgari@berkeley.edu **Webpage**: llp.berkeley.edu/asgari/

Prof. Mohammad Hossein Rohban
Sharif University of Technology (SUT Iran)
Email: rohban@sharif.edu **Webpage**: sharif.edu/∼rohban/