Mohammadreza Mofayezi

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Education

Sharif University of Technology *Tehran, Iran*

Bachelor of Science in Computer Engineering *Sep. 2019 - Current*

- **GPA:** 18.36/20.0
- **Selected Courses:** Artificial Intelligence, Machine Learning, Modern Information Retrieval, Bioinformatics, Linear Algebra, Probability and Statistics, Design of Algorithms

Shahid Sadoughi High School *Yazd, Iran*

Affiliated with National Organization for Development of Exceptional Talents *Sep. 2013 - Apr. 2019*

- Diploma in Mathematics and Physics

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

Generative Vision and Robust Learning Research Group *MPII, Germany*

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

- Proposed a novel benchmark for evaluating the robustness of image classifiers to text-guided corruptions.
- Utilized diffusion models to edit images to different domains.

VITA: Visual Intelligence for Transportation *EPFL, Switzerland*

Undergraduate Research Assistant Under the Supervision of Prof. Alexandre Alahi *Oct. 2021 - Jul. 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 deep generative diffusion model for human motion reconstruction and prediction from incomplete and noisy data that outperforms SOTA models.
- The work resulted in a paper submitted to ICRA, accepted at NeurIPS 2022 Workshop on Score-Based Methods and published on arxiv.

MadLlama *Tehran, Iran*

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

- Worked on Mobile AR Games with ARCore, ARKit and Unity.
- Published 2 Games to App Store.

Voluntary Teaching Experiences

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

Head TA of the course (S2023). 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.

Interests

Representation Learning and Generative Modeling
Robust Learning in Computer Vision
Commonsense Reasoning in NLP

Other Experiences

Reviewer at ICML 2023 *ICML 2023*
Reviewed paper for ICML 2023 Workshop on Structured Probabilistic Inference & Generative Modeling *June 2023*
CS231n: Convolutional Neural Networks for Visual Recognition *Online*
Audited the course from Stanford University *Fall 2021*
Fundamentals of Reinforcement Learning *Online*
Audited the course from the University of Alberta (Coursera certification) *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*

Top Projects

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

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

Social Network *Tehran, Iran*
Data Structures and Algorithms Course, *Prof. Safarnejad* *Spring 2021*
- Designed a simple and fast method of representing social network graphs in Python.
- Implemented a fast cache reply system using the heapq library. Github Link

CFKala *Tehran, Iran*
Advanced Programming Course, *Prof. Mostafazadeh* *Spring 2020*
- Developed a comprehensive app for managing an online shop with Java and Spring Boot. GitHub Link

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 Professional proficiency
Persian Native proficiency
German Elementary proficiency