Mohammadreza Mofayezi

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Education

Sharif University of Technology   *Tehran, Iran*
Bachelor of Science in Computer Engineering   *Sep. 2019 - Current*
- **GPA:** 18.20/20.0
- **Selected Courses:** Artificial Intelligence, Machine Learning, 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

- 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 *NeurIPS 2022 Workshop on Score-Based Methods*, 2022

Research & Work Experiences

VITA: Visual Intelligence for Transportation   *EPFL*
Undergraduate Research Assistant Under the Supervision of Prof. 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.

Teaching Experiences

- **Artificial Intelligence**, Instructor: Prof. Rohban   *Spring 2022, Fall 2022*
  Designed and graded assignments.

- **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   *Fall 2020, Fall 2021*
  Designed and graded assignments. Created reading materials.

Interests

Machine Learning

Computer Vision

Natural Language Processing

Other Experiences

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

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

Cyko Messenger *Tehran, Iran*
Fundamentals of Programming Course, *Prof. Fakouri* *Fall 2019*
- Developed a fast console chat application with C. 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

References available upon request.