

# Mohammadreza Mofayezi

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## Education

### Sharif University of Technology

Bachelor of Science in Computer Engineering

Tehran, Iran

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

Affiliated with National Organization for Development of Exceptional Talents

Yazd, Iran

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

Undergraduate Research Assistant Under the Supervision of Prof. Alahi

EPFL

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

Augmented Reality Developer

Tehran, Iran

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  
Designed and graded assignments. Spring 2022, Fall 2022
- **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  
Designed and graded assignments. Created reading materials. Fall 2020, Fall 2021

## Interests

Machine Learning

Computer Vision

Natural Language Processing

## Other Experiences

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### CS231n: Convolutional Neural Networks for Visual Recognition

Audited the course from Stanford University

Online

Fall 2021

### Fundamentals of Reinforcement Learning

Audited the course from the University of Alberta ([Coursera certification](#))

Online

Summer 2021

### Gamein 2020

Developed a large-scale multiplayer game with Unity3D and C#

Tehran, Iran

Summer 2020 - Fall 2020

## Top Projects

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### WeTube

Computer Networks Course, *Prof. Jafari*

- Developed an online streaming app with Django framework. [GitHub Link](#)

Tehran, Iran

Spring 2022

### Social Network

Data Structures and Algorithms Course, *Prof. Safarnejad*

- 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](#)

Tehran, Iran

Spring 2021

### CFKala

Advanced Programming Course, *Prof. Mostafazadeh*

- Developed a comprehensive app for managing an online shop with Java and Spring Boot. [GitHub Link](#)

Tehran, Iran

Spring 2020

### Cyko Messenger

Fundamentals of Programming Course, *Prof. Fakouri*

- Developed a fast console chat application with C. [GitHub Link](#)

Tehran, Iran

Fall 2019

## Honors and Awards

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2019 **Winner**, Spaghetti Code Contest

2019 **Top 20**, University Entrance Exam; 1st rank among more than 50k students, 15th among 250k students

## Skills

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

## Languages

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<b>English</b>	Professional proficiency
<b>Persian</b>	Native proficiency
<b>German</b>	Elementary proficiency

References available upon request.