

# Mahsa Amani

COMPUTER ENGINEERING

Tehran, Iran

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## Education

### Sharif University of Technology (SUT)

Tehran, Iran

B.Sc. IN COMPUTER ENGINEERING

Sep. 2018 - Feb. 2023

- GPA: 18.03/20

### Farzanegan High School (National Organization for Development of Exceptional Talents (NODET))

Tabriz, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS

Sep. 2011 - Jun. 2018

- GPA: 19.97/20

## Academic Honors

2018 **Membership** In Iran's National Elites Foundation

Iran

2018 **Rank 51st** Mathematics and Physics B.Sc. entrance exam among more than 144,000 participants

Iran

## Research Interests

🧠 **Natural Language Processing (NLP)**

🤖 **Machine Learning**

🖼️ **Computer Vision**

## Relevant Courses

**Natural Language Processing** 20/20

**Artificial Intelligence** 20/20

**Advanced Information Retrieval** 19.3/20

**Signals and Systems** 20/20

**Probability and Statistics** 20/20

**Data Structure and Algorithm** 18.4/20

## Languages

**English** IELTS Overall Bandscore: 7.5 (👂 Listening: 9, 📖 Reading: 7, 🗣️ Speaking: 6.5, ✍️ Writing: 6.5)

**Persian** Native Language

**Azerbaijani** Mother Tongue

## Certificates

📄 2023 **Generative AI with Large Language Models**, Andrew NG.

DeepLearning.AI

📄 2022 **Deep Learning Specialization**, Andrew NG.

DeepLearning.AI

📄 2021 **Introduction to Computer Vision and Image Processing**, IBM

IBM

📄 2021 **Machine Learning**, Andrew NG.

Stanford University

📄 2021 **Introduction to Git and GitHub**, Google

Google

📄 2021 **Natural Language Processing in TensorFlow**, Laurence Moroney

DeepLearning.AI

📄 2021 **Web Application Technologies and Django**, Charles Severance

University of Michigan

📄 2020 **Advanced Python Programming and Object-Oriented Thinking**, Quera

Quera

## Publications

### The Language Model, Resources, and Computational Pipelines for the Under-Resourced Iranian Azerbaijani

Iran

M. AMANI, M. NOURI, R. ZOHRABI, E. ASGARI

Sep. 2023

- In Proceedings of AACL 2023 (Asia-Pacific ACL), Accepted

### Linguistic Resources and Transformer-based Models for the Machine Translations between Luri and Yazdi Dialects versus Standard Persian



Iran

M. AMANI, M. NOURI, Z. BAHMANI, M. MIRBEYGI, N. HASHEMI, E. ASGARI, M. SOLEYMANI BAGHSHAH, H. BEIGY, A. MOVAGHAR

Oct. 2022

- Journal of the Linguistics Society of Iran, Accepted

## Skills

**Programming**  Python, R, C/C++, JAVA, SQL,  $\text{\LaTeX}$   
**ML tools**  Pytorch, Tensorflow, Keras, Scikit-learn, Numpy, Pandas

## Research Experience

### A Large Language Model for Persian

RESEARCH ASSISTANT

Iran

Ongoing

- Development of a multilingual large language model fine-tuned for Persian

### Pipelines for low-resource Iranian Languages

RESEARCH ASSISTANT

Iran

Ongoing

- Developing pipelines for low-resource languages such as Azerbaijani, Luri, Yazdi, and Kurdi

### Explainable Detection of Online Sexism

SEMEVAL2023

Iran

Feb. 2023

- Development of English-language models for sexism detection with fine-grained classifications for sexist content from Gab and Reddit

## Work Experience

### Junior Data Scientist

ZAREBIN

Tehran, Iran

Oct. 2022 - Apr. 2023

- Developing a Shopping Information Retrieval System using Deep Learning Methods

### Teaching Assistant

SHARIF UNIVERSITY OF TECHNOLOGY (SUT)

Tehran, Iran

Sep. 2020 - Jul. 2023

- Natural Language Processing, Dr. Ehsaneddin Asgari
- Probability and Statistics, Dr. Ali Sharifi
- Database Design, Dr. Abbas Heydarnoori
- Operating Systems, Dr. Hossein Asadi
- Python Programming, Dr. Issa Moradnejad
- Digital System Design, Dr. Farshad Baharvand
- Digital Design, Dr. Laleh Arshadi

### Junior Data Analyst

VIVETENNIS

Tehran, Iran

Jun. 2022 - Aug. 2022

- Developing and Analysing Robot Monitoring System

### Undergraduate Student Internship

AIMEDIC

Tehran, Iran

Jul. 2021 - Sep. 2021

- Eye Disease Diagnosis using Artificial Intelligence

## Projects

### 3D Vision Transformers and Convolutional Models for Segmentation Tasks

BACHELOR'S THESIS ON 3D MRI BRAIN TUMOR SEGMENTATION

Iran

Jan. 2022 - Jan. 2023

### Azerbaijani to Farsi Translation

DEVELOPING JOEYNMT FRAMEWORK FOR TRANSLATING AZERBAIJANI TO FARSI USING TRANSFORMERS AND SEQ2SEQ MODELS

Iran

Jun. 2022

### Persian NER and Spell Corrector

FINE TUNING BERT MODEL FOR NAME ENTITY RECOGNITION AND LANGUAGE SPELL CORRECTION

Iran

May. 2022 - Jun. 2022

### Persian QA Extractor

EXTRACTING QUESTIONS AND RESPECTIVE ANSWERS FROM A TEXT USING REGULAR EXPRESSIONS

Iran

April 2022

### Turkish Preprocessing Pipeline

DEVELOPING A PREPROCESSING PIPELINE FOR TURKISH LANGUAGE

Iran

April 2022

### Modern Information Retrieval

A PROJECT INCLUDING INDEXING, COMPRESSING, QUERY CORRECTION, LANGUAGE MODELS, CLASSIFIERS, AND CLUSTERING

Iran

Feb. 2021

### TeleNurse

A LOGISTIC PROJECT FOR PROVIDING HEALTHCARE AND NURSING IMPLEMENTED USING PYTHON DJANGO, POSTGRESQL, AND DOCKER

Iran

Nov. 2022

### Eye Disease Recognition

RECOGNITION OF 7 EYE DISEASES USING TRANSFER LEARNING IMPLEMENTED AS MY INTERNSHIP PROJECT

Iran

Sep. 2021