

# Alireza Ghafouri

✉ alirezaghafouri77@gmail.com  
🌐 alireza-ghafouri.github.io

in alirezaghafouri  
🔗 Alireza-Ghafouri

## Education

### M.Sc. in Computer Engineering - Artificial Intelligence

Master's degree program

Thesis: Semi-Supervised representation learning using deep generative models

Supervisors: [Dr. Reshad Hosseini](#), [Dr. Mostafa Tavassolipour](#)

Final Grade: 19.30/20 (4/4), **Ranked 2nd**

University of Tehran

Sep 2021 – Sep 2024

### B.Sc. in Computer Engineering

Bachelor's degree program

Final grade: 18.33/20 (3.7/4), **Ranked 2nd**

University of Kashan

Sep 2017 – Sep 2021

### High school in Mathematics and Physics

Diploma of Mathematics and Physics

NODET

Sep 2013 – Sep 2017

## Research Interests

✓ **Computer Vision**      ✓ **Generative Models**      ✓ **Trustworthy AI**      ✓ **Multimodal Learning**

## Research Experience

### Computational Audio-Vision Lab ([Website](#))

Research Advisers: [Dr. Reshad Hosseini](#), [Dr. Mostafa Tavassolipour](#)

Jul 2023 – Present

University of Tehran

- Explored diverse classes of deep generative models and their specific applications, with a particular emphasis on their relevance in computer vision.
- Conducted research on robust representation learning, emphasizing a semi-supervised approach.

### Neural marketing using eye movements Prediction ([Website](#))

Research Adviser: [Dr. Ramin Toosi](#)

Jan 2023 – Jun 2023

[Avir Artificial Intelligence Center](#)

- Researched video saliency prediction models and evaluated their performance on proprietary datasets.
- Conducted research on the cognitive aspects of customer shopping behavior.

### Recommendation Systems ([Seminar Report](#))

Research Advisers: [Dr. Abdol-Hossein Vahabie](#), [Zahra Ebrahimian](#)

Sep 2022 – Mar 2023

University of Tehran

- Conducted research and literature review on various recommendation systems, focusing on video data.

## Publications

### Robust representation learning using VAE in semi-supervised setting

Alireza Ghafouri, Reshad Hosseini, Mostafa Tavassolipour

Draft under preparation

University of Tehran

## Honors & Awards

<b>NMA Admission</b>	Served as TA and Lead TA at <a href="#">Neuromatch Academy</a>	2023 & 2024
<b>Ranked 2<sup>nd</sup></b>	The master's degree program	2024
<b>Ranked 19th</b>	National Master's Entrance Exam	2021
<b>Ranked 10th</b>	Student Scientific Olympiad of the country	2021
<b>Ranked 2nd</b>	The bachelor's degree program	2021
<b>Exceptional Talents</b>	Awarded as a Distinguished Student by The University Committee	2021
<b>Straight M.Sc. Admission</b>	Offered by three top universities for exceptional talent	2021
<b>Tuition Fee Exemption</b>	Bachelor & Master's level studies	2017 & 2021
<b>Among the top 2%</b>	National Universities Bachelor's Entrance Exam	2017

## Selected Courses

• <b>Machine learning</b>	20/20 (4/4)	• <b>Data Analysis</b>	19/20 (4/4)
• <b>Deep Learning and Applications</b>	19.25/20 (4/4)	• <b>Statistical Inference</b>	18/20 (4/4)
• <b>Natural Language Processing</b>	18.40/20 (4/4)	• <b>Reinforcement Learning</b>	20/20 (4/4)
• <b>Artificial Intelligence</b>	19.50/20 (4/4)	• <b>Computational Intelligence</b>	20/20 (4/4)

## Teaching Experience

### Machine Learning (TA) - (Youtube1, Youtube2)

Dr. Mohammadreza Abolghasemi, Dr. Mostafa Tavassolipour

### Artificial Intelligence (Head TA)

Dr. Hossein Ebrahimpour

### Deep Learning and Applications (TA)

Dr. Reshad Hosseini

### Computational Neuroscience (TA) - (Certificate)

Global collaboration

### Deep Generative Models (TA)

Dr. Mostafa Tavassolipour, Dr. MohammadAmin Sadeghi

### Statistical Inference (TA)

Dr. Mohammadreza Abolghasemi

### Natural Language Processing (TA)

Dr. Javad Salimi Sartakhti

### Trustworthy AI (TA + Guest Instructor)

Dr. Mostafa Tavassolipour

### Computational Neuroscience (Lead TA) - (Certificate)

Global collaboration

Spring 2022, 2023

University of Tehran

Spring 2022

University of Kashan

Spring 2023

University of Tehran

Summer 2023

Neuromatch Academy

Fall 2023

University of Tehran

Fall 2023

University of Tehran

Spring 2024

University of Kashan

Spring 2024

University of Tehran

Summer 2024

Neuromatch Academy

## Academic Projects

### Deep Learning and Applications

Dr. Reshad Hosseini

Spring 2022

University of Tehran

- Deep fully connected neural network implementation (from scratch using numpy)
- Saliency map prediction using deep neural networks
- Implementation of a deep fully connected network for inverting visual representations of a CNN
- Medical image segmentation Using U-net architecture
- Part of speech tagging for Persian Language using deep recurrent model

### Natural Language Processing

Dr. Heshaam Faili, Dr. Yadollah Yaghoobzadeh

Spring 2022

University of Tehran

- Applying Naive Bayes classification for Spam and Truth detection.
- Conducting POS tagging and Named Entity Recognition (NER) tasks on the Penn Treebank dataset.
- Executed multilingual classification and Persian NLI tasks with BERT-based models.
- Performing question-answering task on a Persian dataset using a BERT-based model.

### Data Analysis

Dr. MohammadAmin Sadeghi

Fall 2021

University of Tehran

- Analysing Corona virus infection
- Scraping Alibaba and MrBilit tickets and analysing the prices
- Web crawling and data cleaning: Obtaining Laptop Listings from Digikala

### Social Networks

Dr. Masoud Asadpour

Fall 2022

University of Tehran

- Persian Users' Graph of Tweets Network Analysis in Iran's 2022 Protests

## Skills

### Programming

Python (Pytorch, Tensorflow, Pandas, NumPy, Scikit-Learn, Matplotlib, NLTK, etc.), R, SQL

### Soft Skills

Leadership, Team Work, Problem Solving, Time Management, Adaptability/Flexibility

### Languages

Persian (Native), English (C1 - TOEFL IBT Overall best Score: 106 (Reading: 27, Listening: 26, Speaking: 25, Writing: 28) - last Score: 104 (R: 27, L: 26, S: 23, W: 28)

## References

### Dr. Reshad Hosseini

📍 University of Tehran

✉️ reshad.hosseini@ut.ac.ir

### Dr. Mostafa Tavassolipour

📍 University of Tehran

✉️ tavassolipour@ut.ac.ir

### Dr. Javad Salimi Sartakhti

University of Kashan

✉️ salimi@kashanu.ac.ir