

# 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

## Research Interests

✓ **Generative AI**    ✓ **Trustworthy AI**    ✓ **Multimodal Learning**    ✓ **Representation Learning**

## Research/Work Experience

### Computational Audio-Vision Lab 🔗

Advisers: Dr. Reshad Hosseini, Dr. Mostafa Tavassolipour

Jul 2023 – Present

University of Tehran

- Investigated and benchmarked diverse deep generative architectures for computer vision tasks, focusing on representation quality and model robustness.
- Designed and evaluated semi-supervised representation learning frameworks to enhance robustness in low-label regimes.

### Neural marketing using eye movements Prediction 🔗

Research Adviser: Dr. Ramin Toosi

Jan 2023 – Jun 2023

Avir Artificial Intelligence Center

- Implemented and benchmarked video saliency prediction models using proprietary eye-tracking datasets.
- Analyzed eye-movement data to model cognitive mechanisms underlying customer purchase decisions.

## Publications

### VAE-FixMatch: Towards Robust Representation Learning in Semi-Supervised Settings

Alireza Ghafouri, Reshad Hosseini, Mostafa Tavassolipour

in final preparation for submission

University of Tehran

## Honors & Awards

<b>NMA Admission</b>	Selected as TA and Lead TA at Neuromatch Academy	2023-2025
<b>Ranked 2nd</b>	M.Sc. in Artificial Intelligence cohort, University of Tehran	2024
<b>Ranked 19th</b>	National Master's Entrance Exam (Among +13,000 Participants)	2021
<b>Ranked 10th</b>	National Student Scientific Olympiad	2021
<b>Ranked 2nd</b>	B.Sc. in Computer Engineering cohort, University of Kashan	2021
<b>Distinguished Student</b>	Awarded by University Exceptional Talents Committee	2020

## Skills

<b>Programming Languages</b>	Python (Pytorch, Tensorflow, Pandas, NumPy, Scikit-Learn, Matplotlib, NLTK, etc.), R, SQL Persian (Native), English (C1 - TOEFL IBT Overall best Score: 106 (Reading: 27, Listening: 26, Speaking: 25, Writing: 28))
------------------------------	---

## 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

### Analysis and Design of Deep Neural Networks (TA)

Dr. Babak N Araabi, Dr. Ahmad Kalhor

Fall 2025

University of Tehran

### Deep Learning (Lead TA) 🧠

Global collaboration

Summer 2025

Neuromatch Academy

### Trustworthy AI (TA + Guest Instructor)

Dr. Mostafa Tavassolipour

Spring 2024

University of Tehran

### Natural Language Processing (TA)

Dr. Javad Salimi Sartakhti

Spring 2024

University of Kashan

### Statistical Inference (TA)

Dr. Mohammadreza Abolghasemi

Fall 2023

University of Tehran

### Deep Generative Models (TA)

Dr. Mostafa Tavassolipour, Dr. MohammadAmin Sadeghi

Fall 2023

University of Tehran

### Computational Neuroscience (TA & Lead TA) 🧠🧠

Global collaboration

Summer 2023, 2024

Neuromatch Academy

### Deep Learning and Applications (TA)

Dr. Reshad Hosseini

Spring 2023

University of Tehran

### Artificial Intelligence (Head TA)

Dr. Hossein Ebrahimpour

Spring 2022

University of Kashan

### Machine Learning (TA) ▶▶

Dr. Mohammadreza Abolghasemi, Dr. Mostafa Tavassolipour

Spring 2022, 2023

University of Tehran

## 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 🧠
- Brain tumor image segmentation Using U-net architecture 🧠
- Part of speech tagging for Persian Language using deep recurrent model 🧠

### Natural Language Processing

Dr. Hesham 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

- Modeled COVID-19 infection trends using statistical inference techniques and public datasets.
- 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

## References

### Dr. Reshad Hosseini

📍 University of Tehran

✉️ [reshad.hosseini@ut.ac.ir](mailto:reshad.hosseini@ut.ac.ir)

### Dr. Mostafa Tavassolipour

📍 University of Tehran

✉️ [tavassolipour@ut.ac.ir](mailto:tavassolipour@ut.ac.ir)

### Dr. Javad Salimi Sartakhti

📍 University of Kashan

✉️ [salimi@kashanu.ac.ir](mailto:salimi@kashanu.ac.ir)