

Farshad Sangari

COMPUTER VISION RESEARCHER · STUDENT

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“Be the change you want to see in the world.”

Education

College of Electrical and Computer Engineering, University of Tehran

Tehran, Iran

MSC: COMPUTER ENGINEERING - ARTIFICIAL INTELLIGENCE

Sep. 2021 - Now

- Cum. GPA: 18.73/20(3.89/4)

K.N.Toosi University of Technology

Tehran, Iran

BSC: ELECTRICAL ENGINEERING - TELECOMMUNICATION

Sep. 2017 - Sep. 2021

- Cum. GPA: 17/20(3.64/4)
- Thesis grade: 20/20(4/4)

Research Interests

Generative models

Explainable A.I.

Robustness

Data Science

Selected Courses

2023	Trustworthy AI , 20/20(4/4)	University of Tehran
2023	Advanced Robotics , 19.24/20(4/4)	University of Tehran
2022	Deep Generative models , 19.8/20(4/4)	University of Tehran
2022	Deep Learning and Applications , 18/20(4/4)	University of Tehran
2021	Machine Learning , 19.2/20(4/4)	University of Tehran
2022	Statistical Inference , 18.4/20(4/4)	University of Tehran
2021	Data science , 18.75/20(4/4)	University of Tehran
2018	Linear Algebra , 18.5/20(4/4)	K.N.Toosi University
2018	Basics of Optimization , 19.5/20(4/4)	K.N.Toosi University

Research Experience

(University of Tehran)Machine learning and computational modeling lab

Tehran, Iran

INTERPRETABLE REPRESENTATION LEARNING VIA GENERATIVE MODELS: BRIDGING UNDERSTANDING AND COMPLEXITY

Feb. 2022

- Supervisors: Dr. Reshad Hosseini - Prof. Babak N. Araabi

(K.N.Toosi University)Fields and Waves in Telecommunications

Tehran, Iran

COMPACT LOW LOSS MILLIMETER WAVE 8-WAY RADIAL WAVEGUIDE POWER COMBINER

Jul. 2021

- Supervisors: Dr. Zahra Ghattan Kashani

Internships

Telecommunications service provider

Birjand, Iran

TELECOMMUNICATION SYSTEMS

Jul. 2021

Teaching Experience

- Sep. 2023 **(Lead TA)Deep Generative models**, By Dr. Mostafa Tavassolipour, Dr. Mohammad Amin Sadeghi
Jan. 2023 **(Lead TA)Deep Learning with Applications**, By Dr. Reshad Hosseini
Apr. 2023 **PyTorch tutorial**,
Apr. 2023 **Pandas and Matplotlib tutorial**,

University of Tehran
University of Tehran
Youtube course
Youtube course

Notable Academic Projects

Trustworthy A.I.

TAUGHT BY DR. MOSTAFA TAVASSOLIPOUR, DR. MOHAMMAD AMIN SADEGHI

- Robust Representation using Angular loss
- Enhancing Model Interpretability by leveraging LIME and SHAP for Comprehensive Explanations
- Out-of-Distribution Detection: Enhancing Model Robustness and Generalization

Tehran, Iran

Nov. 2023

Deep Generative models

TAUGHT BY DR. MOSTAFA TAVASSOLIPOUR, DR. MOHAMMAD AMIN SADEGHI

- RealNVP implementation
- Score matching network Implementation
- Diffusion model Implementation
- VAE and its variations Implementation
- RealNVP implementation

Tehran, Iran

Nov. 2023

Deep Learning and Applications

TAUGHT BY DR. RESHAD HOSSEINI

- Deep Fully connected network implementation(numpy)
- Saliency map prediction using deep neural network
- Deep Fully connected network implementationInverting visual representations for Convolutional Networks.
- Medical image segmentation Using U-net architecture
- Part of speech tagging for Persian Language using deep recurrent model
- Implementing Hubert architecture for Automatic Speech Recognition
- Replicate "DeepGUM: Learning Deep Robust Regression with a Gaussian-Uniform Mixture Model" paper
- Classification and clustering of Iranian instrument genres with classical machine learning methods
- Implementation of Feature Selection Algorithm for Enhanced Performance

Tehran, Iran

Nov. 2023

Data Science

TAUGHT BY DR. MOHAMMAD AMIN SADEGHI

- Analyse Coronavirus infection
- Amazon scraper for laptop
- Analysis of Alibaba vs MrBilit tickets' price
- Web Scraping and Data cleaning: Obtaining Laptop Listings from Digikala

Tehran, Iran

Nov. 2023

Honors & Awards

- Sep. 2021 **Ranked 30th among +20000 in the National Master Entrance Exam**,
Aug. 2021 **4th Rank among all Telecommunication Engineering students at K.N.Toosi University**,
Aug. 2017 **Among the top 1% of Iran Universities Entrance Exam**,

Technical skills

Programming Languages	Python, Matlab,R, C++, SQL, Javascript, HTML, CSS
Deep Learning	PyTorch, Tensorflow, Pandas, NumPy, Scikit-Learn
Operating Systems	Linux (Specially Ubuntu), Windows
Database	MySQL, Postgres
Soft Skills	Team Work, Problem-Solving, Time Management, Adaptability/Flexibility
Languages	Persian(Native), English (TOEFL IBT exam will be taken on Nov. 2023)