Mohammad Amin Faraji

MASTER STUDENT · MECHANICAL ENGINEERING · UNIVERSITY OF TEHRAN

nima.faraji@ut.ac.ir | NimaFrj.github.io | linkedin.com/in/nimafaraji

Research Interests

Machine Learning, Computer Vision, Optimization of mechanical auxetic structures, Application of unsupervised learning methods in transformers

Education

University of Tehran *Tehran, Iran*
MS IN MECHANICAL ENGINEERING *2019 - 2022*
- Advisor: Alireza Daneshmehr

Bu-Ali Sina University *Hamedan, Iran*
BS IN MECHANICAL ENGINEERING *2015 - 2019*

Publications

Investigation of applications of unsupervised learning methods in clustering the test results of transformers. (Work in progress)

Investigation of the characteristics of a non-Pneumatic tire with different spoke shapes. (Link)
Mohammad Amin Faraji, Alireza Daneshmehr - The 30th Annual International Conference of Iranian Society of Mechanical Engineers-ISME2022.

Computational study on a DAH auxetic structure manufactured by corrugated sheets. (Link)
Mohammad Amin Faraji, Hashem Mazaheri - International Conference on Manufacturing Engineering (ICME 2018) @ Tarbiat Modares University.

Professional Experience

05/2017-present **Co-Founder of Persian Revolution Slider - Revslider.ir**

- The objective is to provide website designers with a tool to design their websites and landing pages.

Teaching Experiences

2017 **Dynamics of Machinery**, Teaching Assistant *Bu-Ali Sina University*

2018 **Dynamics and Control Systems Simulation,** Teaching Assistant *Bu-Ali Sina University*

Selected Projects

Comprehensive Study on Feature Importance of Transformers Test Data

- Extracting feature importance of transformers test data and examining their dependencies.

Examining Different Clustering methods for Transformers Test Data

- Finding optimal clusters for transformers test data with unsupervised methods such as DBSCAN and k-means.

Facial Expression Recognition with Keras

- Web deployment of a CNN model for facial emotion recognition using OpenCV and FLASK.

Online Courses

Coursera and Kaggle

- Machine Learning, Improving Deep Neural Networks, Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, Convolutional Neural Networks in TensorFlow, DeepLearning.AI TensorFlow Developer Intermediate Machine Learning, Feature Engineering

Honors and Awards

2014 **Ranked in the top 0.5% of students and a full scholarship for undergraduate study**, Nationwide Universities Entrance Exam for undergraduate study among more than 400,000 participants.

2019 **Ranked 43 among more than 10,000 participants and a full scholarship for graduate study**, Nationwide Universities Entrance Exam for graduate study.

2022 **Achieved second place in the University of Tehran chess championship**

Skills

Software Knowledge

- MATLAB
- ABAQUS
- Adobe Photoshop
- Microsoft Office Collection

Programming Skills

- Advance Python
- FORTRAN
- C/ C++ (Basic)
- HTML / CSS

Artificial Intelligence knowledge

- Relative passed university and online learning platforms courses
- Familiar with AI and data science libraries in Python (TensorFlow, Scikit-Learn, NumPy, Pandas, etc.)

Soft Skills

- Teamwork
- Problem-Solving
- Curious for learning
- Adaptability

Languages

- **Persian** Native speaker
- **English** Advanced (CEFR level: C1)
  - IELTS band score 7 (S:7, R:7.5, L:7.5, W:6)

References

Alireza Daneshmehr, PhD – Master's degree supervisor

Associate Professor, Faculty of Mechanical Engineering, University of Tehran, Tehran, Iran. Email: Daneshmehr@ut.ac.ir

Hashem Mazaheri, PhD – Bachelor's degree supervisor

Associate Professor, Faculty of Mechanical Engineering, Bu-Ali Sina University, Hamedan, Iran. Email: h.mazaheri@basu.ac.ir