





# Mehdi Hosseini Moghadam

+98-9304914806 

m.h.moghadam1996@gmail.com 

Iran - Tehran 

AI Specialist & Data Scientist

## About Me

I am an AI Specialist & Data Scientist  
Formerly Co-Founder of Kouventa  
With Over 7 Years of Academic  
Experience and Over 3 Years of  
Industrial Experience in AI and Data  
Science.

## Skills

- Project Management
- Problem Solving
- Creativity
- R&D
- Communication Skills

## Expertise

- Artificial Intelligence
- Data Mining
- Computer Vision
- Natural Language Processing
- Speech Technology

## PROGRAMMING LANGUAGES:

- Python
- R
- C++

## Work Experience

- |            |   |
|------------|---|
| 2019 -2021 | <b>Co-Founder   Kouventa AI</b>   |
| 3 years    | I was Responsible for Research and Development of Machine Learning and Deep Learning Modules for Chatbots (NLP, NLG, NLU), Data Gathering, and Data Transformation.   |
| 2018       | <b>Data Science intern (Spatial Data Analysis)   FAO</b>  |
| 2 Months   | I collaborated on a project called <u>Crop Estimation with Satellite Images</u> , which is a sub field of remote sensing and spatial data analysis, and in the project I helped to use sentinel-2 satellite images and analyse them with different filters and predictive models like convolutional neural networks and random forests in order to estimate and forecast the amount of crop that will be produced in the next few months. |

## Education

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|-----------|--|
| 2014-2018 | <b>Master of Data Mining   Kharazmi University</b>           |
| 5 years   | Graduated with 1st. Class                                    |
| 2019-2021 | <b>Bachelor of Applied Mathematics   Kharazmi University</b> |
| 2 years   | Graduated with 1st. Class                                    |

## ACTIVITIES & AWARDS

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|------|--|
| 2016 | Member of student mathematical society                             |
| 2017 | Bronze medal in 41st Iranian Mathematical Society(IMS) competition |
| 2017 | Joining to the Elite foundation of Kharazmi university             |

## TALKS & WORKSHOPS

- |                    |  |
|--------------------|--|
| December 15, 2020  | <u>Topological Data Analysis for Classification of DeepSat-4 Dataset</u><br>Conference Talk, 2020 10th International Symposium on Telecommunications (IST) , Tehran, Iran                          |
| September 18, 2018 | <u>Topological Data Analysis</u><br>Tutorial, Kharazmi University, Department of Engineering , Tehran, Iran<br>A Talk Around Theory, Concepts, and Tools in the Field of Topological Data Analysis |

## FRAME WORKS:

Pytorch  
TensorFlow  
Numpy  
Pandas  
scikit-learn  
Matplotlib  
NLTK  
Spacy  
Spark NLP  
Docker

## REFERENCES:

Dr. Bardia Panahbehagh (Associate Professor, Faculty of Mathematics and Computer Science - Kharazmi university): panahbehagh@khu.ac.ir

Dr. Mir Mohsen Pedram (Associate Professor, Faculty of Engineering - Kharazmi university): pedram@khu.ac.ir

Dr. Naierreh Elyasi (Assistant Professor, Faculty of Mathematics and Computer Science - Kharazmi university): elyasi82@khu.ac.ir

## LANGUAGES

Persian : Native

Turkish : Native

English : IELTS band score 7

English : IELTS Life Skills B1



• <https://www.linkedin.com/in/mehdi-hosseini-moghadam-384912198/>



• m.h.moghadami996@gmail.com



• +98 9304914806



• <https://scholar.google.com/citations?user=TKWbohsAAAAJ&hl=en>



• <https://mehdihosseini-moghadam.github.io/>

July 11, 2018

### Topological Data Analysis with Python

Talk, Kharazmi University, Department of Computer Science & Mathematics, Karaj, Iran  
A Talk Around Theory, Concepts, and Tools in the Field of Topological Data Analysis

May 12, 2017

### Deep Learning With TensorFlow

Tutorial, Kharazmi University, Department of Computer Science & Mathematics, Karaj, Iran  
An 8 Week Tutorial on Deep Learning with TF (CNN, RNN, GAN, RL)

February 01, 2016

### Data Mining With R

Work Shop, Kharazmi University, Department of Computer Science & Mathematics, Karaj, Iran  
Work Shop Covered Beginner to Advanced Topics in R (From Fundamentals to Machine Learning)

## PAPERS

- Elyasi, N. and Moghadam, M.H., 2019. An introduction to a new text classification and visualization for natural language processing using topological data analysis. arXiv preprint arXiv:1906.01726. [Paper Link](#)
- Moghadam, Mehdi Hosseini, and Mir Mohsen Pedram. "Topological Data Analysis for Classification of DeepSat-4 Dataset" 2020 10th International Symposium on Telecommunications (IST). IEEE [Paper Link](#)
- Moghadam, M.H. and Panahbehagh, B., 2018. Creating a New Persian Poet Based on Machine Learning. arXiv preprint arXiv:1810.06898. [Paper Link](#)
- Elyasi, N. and Moghadam, M.H., Classification Of Skin Lesions By Topological Data Analysis Alongside With Neural Network. [Paper Link](#)

## OPEN SOURCED SOFTWARES

- [Punctuation and Capitalization](#)  
This Repo Contains Implementation and explanation of Punctuation and Capitalization System for ASR models
- [Catalan Text To Speech](#)  
This Repo Contains Implementation of Catalan Text To Speech With Some Samples
- [Vq-VAE Methods for Sound Reconstruction](#)  
This Repo Contains Implementation of Vq-VAE methods for sound reconstruction in Pytorch
- [Complex Neural Networks](#)  
[This Repo Contains Implementation of Complex Valued Neural Networks in Pytorch](#)
- [shapedetector](#)  
This Package contains YOLOv5 model which has been trained over dataset of shapes (containing two classes of polygons and ellipse), model is capable of detecting two classes and counting the number of each class in a given image
- [ChexpertClassifier](#)  
This Package contains EfficientNet B3 model which has been trained over CheXpert Small version for 30 epochs and can be used to classify chest X-ray images for 14 classes
- [CatalanTTS](#)  
This Repo Contains Implementation of Catalan Text To Speech With Some Samples
- [HuggingFace ASR Repo](#)  
Automatic Speech Recognition in 8 Different Languages