Mehdi
Hosseini
Moghadam

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UK - Oxford 📍

AI Specialist & Data Scientist

About Me

I am an AI Specialist & Data Scientist Formally Co-Founder of Kouventa With Over 7 Years of Academic Experience and Over 6 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
- Geospatial Data Analysis

PROGRAMMING LANGUAGES:

- Python
- R
- C++

Work Experience

2022 - 2023

1 year

ML Engineer | Agilysis LTD

My main duty is to create a sophisticated digital twin for Air Quality. Geospatial data analysis method to enhancing digital twin products through machine learning and data-driven insights. This tool allows you to select any area in the UK and by interacting and changing any kind of geospatial and transportational variable you can simulate air quality in real world level.

2019 - 2022

3.5 years

Co-Founder | Kouventa AI

I was Responsible for Research and Development of Machine Learning and Deep Learning Modules for Chatbots (NLP, NLG, NLU), Data Gathering, and Data Transformation.

2017 - 2018

1.5 year

Data Scientist (Spatial Data Analysis) | FAO

I collaborated on a project called Crop Estimation with Satellite Images, 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

2014-2018

4 years

Master of Data Mining | Kharazmi University

Graduated with 1St. Class

2019-2021

2 years

Bachelor of Applied Mathematics | Kharazmi University

Graduated with 1St. Class

ACTIVITIES & AWARDS

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   Topological Data Analysis for Classification of DeepSat-4 Dataset 🔗
Conference Talk, 2020 10th International Symposium onTelecommunications (IST) , Tehran, Iran

Date	
September 18, 2018	**Topological Data Analysis** 🔗 Tutorial, Kharazmi University, Department of Engineering , Tehran, Iran A Talk Around Theory, Concepts, and Tools in the Field of Topological Data Analysis
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 Begginer 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

- **CatalanTTSo** 🔗
 This Repo Contains Implementation of Catalan Text To Speech With Some Samples

- **HuggingFace ASR Repo** 🔗
 Automatic Speech Recognition in 8 Different Languages