Mohammad Hossein **Mohammadi**

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Research Interests

- Artificial Intelligence, Machine Learning
- Optimization Algorithm, Neural & NeuroFuzzy Network
- Computer Vision, Signal and Image Processing

Education

Islamic Azad University, Najafabad Branch *Najafabad, Iran*
BSc in Computer Engineering (Information Technology) *Sept 2015 – Sept 2021*
- Last 2 years' GPA 3.12/4 (15.54/20)
- **Thesis Title**: Semantic segmentation of breast cancer pathology images using the U-Net model
  Supervisor: Dr. Mehdi Jabalameli

Patents

2021	**IR Patent. ir 139850140003011312**, The system for early detection of Heterochromia disease in the neonates. S.Y.Moradi, M.H.Mohammadi.	*Approved*
2020	**IR Patent. ir 139850140003011419**, Pocket Protector Of Sensitive Injective And Inhalant Vials Against Temperature And Impact Changes. S.Y.Moradi, M.H.Mohammadi, P.Mohammadi.	*Approved*

Publications

2020	**Arna, ISBN 978-600-356-922-8**, A Step-By-Step Guide to Patenting in Iran. M.H.Mohammadi, A.Karimi, S.Y.Moradi. [View on Amazon]	*English*
2021	**Arna, ISBN 978-622-291-016-7**, TensorFlow Tutorial. M.H.Mohammadi, S.Y.Moradi.	*Persian*
2021	**Arna, ISBN 978-622-291-049-5**, Basics of Artificial Intelligence. M.H.Mohammadi, S.Y.Moradi, M.Mohammadi.	*Persian*

Selected Projects

Emotion Recognition using Convolutional Neural Network *Academic*
Python, TensorFlow, Keras, OpenCV, NumPy *Feb 2023*
- **Project Summary and Goal:** The project aimed to develop a Convolutional Neural Network (CNN) model capable of recognizing human emotions from facial expressions captured in images.
- **Achievements: (1):** Successfully trained a CNN model with high accuracy in recognizing emotions from facial expressions.
  (2): Developed a user-friendly interface for real-time emotion recognition from live video feeds.
  (3): Presented the project at a local tech symposium, garnering positive feedback from peers and faculty members.

Object Recognition using Recurrent Neural Network *Academic*
Python, TensorFlow, Keras, OpenCV *May 2022*
- **Project Summary and Goal:** The project aimed to develop a Recurrent Neural Network (RNN) model for object recognition in images, focusing on sequential data processing for identifying objects in videos or temporal sequences.
- **Achievements: (1):** Successfully trained an RNN model capable of recognizing objects in sequential data with high accuracy.
  (2): Implemented the model to detect and track objects in real-time video streams, demonstrating its practical application.
  (3): Presented the project findings at a departmental seminar, receiving commendation for innovative use of RNN in object recognition.

Automatic number-plate recognition with Deeplearning using pytorch *Academic*
Python, PyTorch, OpenCV *Nov 2021*
- **Overview**: The project aimed to develop an automatic number-plate recognition system using deep learning techniques with PyTorch, focusing on accurately detecting and extracting license plate numbers from images.
- **Achievements: (1):** Successfully trained a deep learning model using PyTorch to recognize license plates with high accuracy, even in varied lighting and weather conditions.
  (2): Implemented the system into a user-friendly application capable of processing images and extracting license plate numbers in real-time.
  (3): Presented the project at a regional tech expo, receiving positive feedback for the practical application of deep learning in automated systems.

Achievements

2nd Team Rank *Tehran, Iran*
Sharif University of Technology *Sept 2019*
- 7th Mobile Programming Marathon along with the "Chelesme" team members, 85 teams participated from Iran, Sharif University of Technology.

3rd Team Rank *Tehran, Iran*
Sharif University of Technology *Sept 2017*
- 4th Mobile Programming Marathon along with the "Yakhmak" team members, 90 teams participated from Iran, Sharif University of Technology.

Work Experience

Product Designer (Design System Manager) *Tehran, Iran*
Self-Employed *Jan 2023 – Present*
- Dedicating efforts to contribute to open-source projects, along with focusing on Persianization and enhancing system design within the Figma community.

UI/UX Designer *Copenhagen, Denmark*
PizzaBar *Jan 2022 – Dec 2022*
- Crafting a bespoke CRM design from inception to completion, ensuring a tailored solution that addresses specific needs and functionalities with meticulous attention to detail.

Skills

Program Languages	Python, Java, R, Matlab.
Machine Learning	Discriminative and Generative Models; Reinforcement Learning; Multi-task Learning; Graph Neural Networks.
AI, Big Data	PyTorch, scikit-learn, Keras, TensorFlow, NumPy, Pandas, MapReduce (Hadoop).
Data Mining	PyData, SciPy, SQL, NoSQL(Mongo), Jupyter.
Data Science	Mixed Linear Model, Hierarchical Logistic Regression, A/B Testings, Crowdsourcing (MTurk).
Server, Database	Node.js, MongoDB, PostgreSQL, Kubernetes, Docker, Google Cloud, AWS EC2, Heroku, Azure.
Web, Mobile	HTML/CSS/, React, Apache, Android(Java).
Version Control	Git, GitHub.

Languages

Persian	Native proficiency
English	Moderate

References available upon request.