

Mohammad-Ali Mahmoudpour

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Profile Summary

I am an artificial intelligence engineer with deep expertise in computer vision, image processing, and deep learning, and a strong foundation in programming languages. My primary focus lies in developing advanced AI solutions, including real-time object detection, image quality assessment, and retrieval systems, while leveraging critical thinking, collaboration, and effective communication skills to drive successful project outcomes.

Beyond my technical capabilities, I am an active contributor to the academic and professional community, having served as president of scientific associations and organized competitions and conferences, demonstrating leadership and a proactive approach in research and professional engagement.

Education

MS Shahid Beheshti University, MS in Digital Electronics – Tehran, Iran Sept 2018 – May 2021
Thesis: No-Reference Image Quality Assessment Using Local and Global Features (Supervisor: Dr.Kian Jafari)

BS **University of Science and Technology of Mazandaran**, BS in Electrical Engineering – Sept 2013 – Jan 2018
Mazandaran, Iran
Thesis: Foreground Detection using Gaussian Mixture Models (GMM) (Supervisor: Dr.Reza Abdollahi)

Research Interests

- Machine/Deep Learning
- Image Processing (Image Quality Assessment, Biomedical Image Analysis)
- Computer Vision (Detection, Segmentation)
- Multi-modal Image Analysis

Experience

Amnpardaz Software Co. , Artificial Intelligence Engineer – Alborz, Iran	2025 – present
• LLMs Prompt Engineering • Cyber threat intelligence analysis by LLMs	

RCDAT , Artificial Intelligence Engineer – Tehran, Iran • 4+ years in real-time object detection & AI deployment. • Designed YOLO pipelines with face quality checks. • Built & containerized FastAPI/Flask services (Docker). • Developed vehicle retrieval under adverse conditions. • Created custom DLStreamer plugin (base64, cross-line, ROI).	2021 – 2024
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Vafatech, Data Scientist – Tehran, Iran 2022 – 2025

- 3+ years in ML development & deployment.
- Built social listening pipelines for data analysis.
- Large-scale web scraping with Selenium & BeautifulSoup.
- Set up & tested scraping servers for stable pipelines.

Publications

No-reference Quality Assessment of Contrast-distorted Images using Contrast-enhanced Pseudo Reference** 2025
Mohammad-Ali Mahmoudpour, Saeed Mahmoudpour, Kian Jafari
 (arXiv preprint)

Torque Profile Optimization of New Hybrid Reluctance Motor Using DOE Response Surface Methodology
Mohammad-Ali Mahmoudpour, Ali Harooni, Mojdeh Hossein Nejadi, Aghil Ghaheri, Ebrahim Afjei
 (2024 4th International Conference on Electrical Machines and Drives (ICEMD))

Neural Networks & Logistic Regression for FPGA Hardware Trojan Detection

Oct 2023

Milad Pazira, Yasser Baleghi, **Mohammad-Ali Mahmoodpour**, Hossein Jafari

(2023 5th Iranian International Conference on Microelectronics (IICM))

A learning based contrast specific no reference image quality assessment algorithm

Feb 2022

Mohamadali Mahmoodpour, Abdollah Amirany, Mohammad Hossein Moaiyeri, Kian Jafari

(2022 international conference on machine vision and image processing (MVIP))

Skills

Programming Languages: Proficient with Python, T-SQL and familiar with R and Rust

Libraries: AI Agents (CrewAI, LangChain), LLM (Transformers), Machine Learning (Pytorch, Tensorflow(Keras), Scikit-learn), Image Processing(OpenCV, Pillow, Scikit-image), Data Handling(Numpy, Pandas), Apache Airflow

Web: APIs (RESTfulAPI, Flask, FastAPI), Scraping (Selenium, BeautifulSoup)

Databases: PostgreSQL, MySQL, MongoDB

Tools and Deployment: Docker, Kafka, Git, Linux, LATEX

Language Skill: *English:* Advanced (expected IELTS band: 6.5–7.0) *Persian:* Native

Honor & Awards

- My paper was selected as one of the top papers at MVIP 2022
- President, University Scientific Association at MAZUST (2015-2016)
- Ranked top 2% out of 40,000 participants, in Iranian university entrance exam for M.Sc. degree.
- Served as the head of scientific associations and organized competitions and conferences
- Accepted in the admission on exam for gifted and talented high schools (Nemuneh), Mazandaran Province, Iran.

Projects

Depth Estimation using Depth from Defocus (DFD) – Shahid Beheshti University

2020

Implemented a depth estimation pipeline based on Depth from Defocus techniques. Captured and processed multiple images with varying focus levels to infer depth maps. Utilized image sharpness and blur modeling for accurate pixel-wise depth prediction

Traffic Sign Classification using CNNs

2019

Developed a CNN-based image classification model to recognize and categorize traffic signs. Trained and evaluated the model on labeled datasets to achieve high accuracy in multi-class classification. Applied data augmentation techniques to improve generalization.

face anti-spoofing (Liveness detection)

2019

Worked on a face anti-spoofing project using a confidential dataset. Cleaned and preprocessed the dataset to ensure high data quality. Tested multiple algorithms to evaluate and select the best-performing method. Delivered the final Dockerized solution to the client for seamless deployment and scalability.