

MOHAMMAD HASHEMI

AI ENGINEER

+989170133244

mhashemi1379@gmail.com

github.com/Amahseyn

linkedin.com/in/smhashemi/

SUMMARY

I'm an AI Engineer with 3 years of experience and I spent most of my career doing **Computer Vision** projects. My preference is to enhance my skills in various fields (**Machine learning** and **Reinforcement learning**) and enjoy learning them. I am eager to solve difficult problems with simple solutions and want to be inspired by the tricks in real life.

WORK EXPERIENCE

Arooj Company

Computer Vision Engineer • dec2021 - Present

Shrimp Head Cutter

(jan2021_jul2022)

- Design infrared LEDs and optimized camera parameters (ISO, shutter) to operate effectively in diverse conditions and capture better images to process.
- Process shrimp images and detect head shrimp at various angles using equalization and edge detection methods in OpenCV to work in real time with high accuracy.
- Implement in Raspberry Pi and test accuracy and time of processing

Hand Vein Detection Device

(jul2022_dec2023)

- Designed and implemented a multi-condition arrangement of various near-infrared (NIR) lights.
- Configured an Infrared PiCamera system to visualize veins effectively.
- Process images using bandpass filters and OpenCv methods
- Preprocess images and create a dataset for training deep learning segmentation models (Unet, Segnet, Yolo, MobileNet,...) with pytorch/tensorflow framework and optimize models to work in real-time with Raspberry Pi.

Freelance

2022 - Present

Persian Plate Recognition

- Designed real-time plate detection model using TensorFlow/Keras and trained Persian character classification and create api with flask for Mobile App Development.

Tomato Leaf Disease Detection

- Design and optimize deep-learning model based on CNN to detect Tomato Leaf Disease to work on embedded systems and mobile applications to work in real time.

Baby Cry Emotion Detection

- Preprocessed baby crying voice, extracted features, designed a smaller deep-learning (CNN) model and enhanced the accuracy from 75% to 88%. Optimized the model for fast execution, ensuring efficient application in real-time scenarios.

Barcode Recognition

- Implement Image enhancer in OpenCV and image processing method in OpenCV to process low-quality barcode Images.

EDUCATION

Bachelor of Telecommunications engineering

Isfahan University of Technology • 2019–2023

CERTIFICATIONS

Neural Networks and Deep Learning

Coursera. • 2021

Structuring Machine Learning Projects

Coursera. • 2021

Fundamentals of Reinforcement Learning

Coursera. • 2022

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

Coursera. • 2021

Convolutional Neural Networks

Coursera. • 2021

Sample-based Learning Methods

Coursera. • 2022

SKILLS

Work with:

- Computer Vision Algorithm
- Deep learning
- Python
- Raspberry Pi Development

Experience with:

- Machine Learning Algorithms
- MATLAB
- Time Series Forecasting
- API Models (Flask)
- C++

Familiar with:

- Reinforcement Learning Algorithms
- Git
- Docker
- Data Science Concepts