MOHAMMAD HASHEMI

ML ENGINEER

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SUMMARY

I'm a Machine Learnining Engineer with 4 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 **Backend**) and enjoy learning them.

WORK EXPERIENCE

Arooj Company

Computer Vision Engineer • dec2021 - july2024 - hybrid

Hand Vein Detection Device

- Preprocess images and **create a dataset** for training deep learning segmentation models (**Unet, Segnet, Yolo,**...) with **pytorch/tensorflow** framework and optimize models to work in real-time with Raspberry Pi.

Shrimp Head Cutter

- 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

Freelance

2022 - Present - Remote

Baby Cry Emotion Detection

- **Customized two CNN models**: one to detect if a baby is crying, and another to classify the reason for the crying and reach to 95%
- **Api** model using **FastApi - Dockerize**

ADHD Diagnosis

- Preprocessed activity data and extracted features using the **signal processing** concepts
- Tested various machine learning algorithms (**Random Forest, SVM**) with **grid search** and cross-validation to achieve better accuracy.

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 with remarkable accuracy(**97%**)

Twitter Sentiment Analysis

- Cleaned and preprocessed NLP datasets, performed feature extraction, and trained various classification models (**RNN, LSTM, Decision Tree**) to optimize performance and accuracy in **natural language processing** tasks.

Oral Cancer Diagnosis

- Design a CNN model for oral cancer diagnosis, increasing accuracy from 78% to 90%

SKILLS

Work with:

- Computer Vision Algorithm
- Deep learning
- Python
- Machine Learning Algorithms

Experience with:

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

Familliar with:

- Reinforcement Learning Algorithms
- NLP
- Generative Models
- Git
- Docker

Libraries

- Tensorflow
- Pytorch
- Scikit-Learn
- Pandas
- Numpy
- OpenCV

EDUCATION

Bachelor of electrical engineering

PGU Bushehr University • 2019–2023