Mohammad Khalili

artificial intelligence engineer

A junior AI developer with a burgeoning interest in machine learning and deep learning techniques. Hands-on experience with projects like an appointment booking system for barbers. Eager to learn and grow in the field of artificial intelligence, with a strong enthusiasm for tackling new challenges and expanding skill sets.

Contact

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Education

2021 - ongoing

B.Sc. Electrical Engineering (communication)

K. N. Toosi University — Iran/Tehran

score

GPA 16

Discrete signal processing (DSP) 19.5

linear algebra 18.5

Skills

- **Python**
- **Linux**
- Git
- Docker
- Django
- **Hugging Face**
- Sql
- REST API
- Css
- Tensorflow
- **raspberry pi**
- **Transformers**
- Kaggle
- **Pytorch**
- **yolo**
- IOT
- Html
- C++

Language

English(Upper-Intermediate)

German(Beginner)

Persian(Native)

Work Experience

Rasana (LINK) may-2024

Computer Vision Engineer **on site**

- Working with the wider development team
- Working with YOLO and face recognition
- Utilizing transformer models for NLP
- Working on few-shot learning
- Working on face recognition

Teaching Assistant october-2024

Digital Signal Processing (DSP) **part time**

Presented by Dr. Mohebbi

- Assisted in delivering DSP course content, grading assignments, and conducting lab sessions.
- Supported students with DSP concepts and tools like MATLAB/Python.

Projects

Other projects with portfolios (LINK)

Sound Detection for Component Status (LINK)

2024

AI-powered system for classifying component sounds as "intact" or "broken." Key highlights:

- Utilized Short-Time Fourier Transform (**STFT**) for time-frequency analysis, extracting robust features from audio signals.
- Applied noise reduction and preprocessing to improve model accuracy.
- Trained using a labeled dataset of intact and broken component sounds.
- Integrated with **real-time monitoring** to detect and alert users about anomalies.

Component Counter System (LINK)

2024

AI-powered solution for counting bolts and nuts in a company setting. Key highlights:

- Utilized **YOLO** for real-time object detection and tracking.
- Deployed on a **Raspberry Pi**, enabling edge computing for compact and cost-effective deployment.
- Enabled precise counting of components, with unique IDs assigned to each detected item.
- Visual overlays display object IDs, trajectories, and live count metrics.

Control devices with internet(IOT) (LINK)

2021

Smart Home Temperature and Light Control Project Using ESP8266 Module

- Ability to change the device's Wi-Fi connection to any other Wi-Fi network within the local server environment.
- Logging temperature data.
- Alerting the user if the temperature exceeds a certain threshold.
- Remote control of home lighting intensity.
- Integration with a mobile app for easy access and control from anywhere

Hand Gesture Controlled LED Display (LINK)

2021

- Real-time Hand Gesture Recognition: Used **OpenCV** and cvzone to detect and count raised fingers.
- Serial Communication: Transmitted finger count to Arduino.
- LED Control: Displayed numbers (0-5) with LEDs based on hand gestures.
- User-Friendly: Simple setup and intuitive interface.
- Technologies: Python, OpenCV, cvzone, Arduino

Barber Appointment (LINK)

2023(December)

Barbers can define their working days and time slots. Customers choose their preferred barber, available day, and time to book appointments. Key features include:

- Each barber has access to an admin panel to manage their schedule, including the ability to deactivate bookings for specific days.
- Customers and barbers have the option to cancel appointments.
- Barbers can set break times during the day, and the system prevents appointment bookings during these breaks.

Recommander System (LINK)

2024

Using a basic recommendation model to suggest how to organize products for purchase. Key features include:

- Providing simple recommendations on the arrangement of grocery items for efficient shopping.
- User-friendly interface for ease of use.
- Integration with a mobile app for accessibility on various devices.
- Minimal setup required, making it an easy and straightforward project for beginners