# **Muhammad Mazhar**

Data Scientist | Machine Learning | Al Engineer

With a solid foundation built over many years in Electronics Engineering, I am now an aspiring Data Scientist, Machine Learning, and AI Engineer. My expertise spans deep analytical capabilities, computer science modeling, and proficiency in Python, TensorFlow, PyTorch, and other data-driven tools. I've successfully applied these skills in impactful projects. Holding both an MBA and a Bachelor's in Electronics Engineering, I am eager to leverage data to drive business insights and innovation in my new career path.

#### **WORK EXPERIENCE**

## ML Engineer | Omdena Inc. | May 2024 - Present

## Omdena-Innovation Challenges

Soil Nutrient Prediction for Enhanced Fertilizer Recommendations

EDA, Modeling for SOC, Boron, Zn, API Development in FastAPI, Streamlit App for PoC.

## 3D Roof Reconstruction with CV for Solar Energy Optimization

Contributed to 3D reconstruction model development, which includes PointNet Segmentation Model Implementation to identify roof tops.

### **Omdena-Local Chapter Challenges**

Identifying Potential Areas for Urban Agriculture in Milan, Italy

Contributed mainly in task 1 of the Omdena challenge, which includes data collection from Google Earth Engine, EDA and visualization, unsupervised modeling and web app development.

## Electronics Engineer (R&D) | MK Electronics | 2003 - Present

#### Key Responsibilities

- Design and Development of industrial control & automated systems by using microcontrollers, PLCs.
- Designing also includes PCB Layouts (using PC based CAD systems).
- Programming microcontrollers.
- Product testing and manufacturing.
- Estimation, preparation of technical documents.
- Service and Repair control systems.

# **Key Accomplishments**

- Successfully designed, developed, Installed and Commissioned 'Load Shedding Module for a renowned client.
- $\diamondsuit$  Successfully designed and developed 'Programmable 4-20mA Indicator and Controller for a client.
- Other projects including 'Tower Light Monitoring Unit', 'Sequence Controllers'.

## **EDUCATION**

## MBA in Business Administration – May 2008

The University of Northampton, England

## Bachelor of Engineering (Electronics) – Jan 2002

NED University of Engineering and Technology, Karachi, Pakistan

## **Udemy**

Several Udemy courses on Python, Data Science, ML/DL, Power BI, Computer Vision, FastAPI, Databases etc.

#### CONTACT

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- github.com/mm-mazhar/mazhar
- mmazhar.onrender.com (Portfolio)

#### **SKILLS**

## Languages

Python,

JavaScript-Novice

### **Frameworks**

TensorFlow, PyTorch, Scikit-Learn, OpenCV

**Data Visualization**PowerBI, Plotly

#### **Databases**

MySQL, PostgreSQL, Redis, Firebase

# Scraping

Selenium, Beautiful Soup

### Web Frameworks FastAPI, Flask

Markup Language HTML

Design Language CSS

## **Projects**

- End-to-End Regression Model Pipeline

From Data Scraping to
Deployment: Using PyPI Model
Packaging, Fast API, Docker
with CI/CD Integration

- ANPR with EasyOCR

Automatically Number Plate Recognition (ANPR) from given images, webcam, and videos by using transfer learning from Pre-Trained Model SSD MobileNet v2 from TF Model Zoo.

For More Please Visit:

https://mmazhar.onrender.com