

Muhammad Mazhar

Machine Learning 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. I also hold both an MBA and a Bachelor's in Electronics Engineering degrees, 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. Tools used Python, Matplotlib, Seaborn, Plotly, Scikit-Learn, Feature Engine, ML Flow, FastAPI, Streamlit.

[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. The PointNetSeg model processes the transformed features to perform point-wise segmentation. The model's final layer predicts the class of each point. While data preprocessing, also wrote some scripts for data cleaning.

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 (Satellite Imagery Processing), EDA and visualization, unsupervised modeling and web app development. Tools used Python, JavaScript, GDAL, Rasterio, GeoPandas. Spatial joining, Interpolation using kriging Interpolation Method

Electronics Engineer (R&D) | MK Electronics | 2003 - 2024

Key Responsibilities

- ◆ Design and Development of industrial control & automated systems by using micro-controllers, 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.
- ◆ 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 2003

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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- [+966 549800930](#)
- [Email](#)
- [LinkedIn](#)
- [GitHub](#)
- [Portfolio](#)
- [WhatsApp](#)

SKILLS

Languages

Python,
JavaScript– Novice

Frameworks

TensorFlow, PyTorch, Scikit-Learn,
OpenCV

Data Visualization

PowerBI, Plotly

Databases

MySQL, PostgreSQL, Redis, Firebase

Scraping

Selenium, BeautifulSoup

Web Frameworks

FastAPI, Flask

Markup Language

HTML

Design Language

CSS

Other 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: [Portfolio](#)