Muhammad Mazhar
AI/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. Also wrote 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

WordPress Developer
2016-2024 | Freelance

Assistant Manager Purchase
2012-2016 | MK Engineering Services, Pakistan

Procurement Officer
2009-2012 | MK Engineering Services, Pakistan

Electronics Engineer (R&D)
2003-2005 | MK Electronics, Pakistan

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

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

CONTACT

- **Email, LinkedIn, GitHub, Portfolio, WhatsApp**
- **Phone: +966 549800930**
- **Open to Remote**
- **Authorized to work in USA**

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

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**