Muhammad Mazhar

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Portfolio: https://mm-mazhar.github.io/mmazhar.github.io/

SUMMARY

ML Engineer with strong analytical skills and proficiency in Python, TensorFlow, and PyTorch. Successfully contributed to projects like soil nutrient prediction and 3D roof reconstruction for solar energy optimization. Eager to leverage technical expertise to drive innovation and insights as a Python Engineer or ML Engineer or Data Analyst.

WORK EXPERIENCE

Omdena Inc.   **May 2024 - Present**
ML Engineer (Internee)   *Remote*

- Developed a soil nutrient prediction model to enhance fertilizer recommendations, utilizing Python and machine learning techniques to improve agricultural efficiency
- Conducted exploratory data analysis and modeling for SOC, Boron, and Zn, using Python, Matplotlib, Seaborn, and Scikit-Learn, leading to the development of APIs with FastAPI and Streamlit for data visualization and accessibility
- Implemented 3D roof reconstruction using computer vision techniques to optimize solar energy capture, enhancing energy efficiency for residential and commercial buildings
- Contributed to the development of a 3D reconstruction model by implementing the PointNet Segmentation Model to identify rooftops, improving the accuracy of point-wise segmentation and data cleaning processes
- Identified potential areas for urban agriculture in Milan, Italy, using data analysis and geographic information systems to support sustainable urban development
- Led task 1 of the Omdena challenge by collecting data from Google Earth Engine, performing EDA and visualization, and developing a web app using Python, JavaScript, GDAL, Rasterio, and GeoPandas, which improved the efficiency of satellite imagery processing

Freelance   **Jan 2016 - 2024**
WordPress Developer   *Remote*

MK Engineering Services, Pakistan   **Jan 2012 - 2016**
Assistant Manager Purchase   *Pakistan*

MK Engineering Services, Pakistan   **Jan 2009 - 2012**
Procurement Officer   *Pakistan*

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

SKILLS

- **Languages**: Python, JavaScript
- **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

EDUCATION

The University of Northampton, England   **May 2008**
MBA, Business Administration

NED University of Engineering and Technology, Karachi, Pakistan   **Jan 2003**
Bachelor of Engineering, Electronics