Mahnoor Tauqeer

ML Engineer

An ambitious electrical engineer transitioning into AI and ML with a focus on computer vision and NLP. I have experience with deep learning frameworks like TensorFlow and PyTorch, as well as GPU programming using CUDA. My goal is to contribute to AI applications, especially in areas like object detection and satellite imagery analysis. I aim to leverage my expertise to spearhead innovation and make a substantial impact in this dynamic field.

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EDUCATION

MS in Electrical Engineering
National University of Science and Technology- NUST

09/2023 - Present *3.83/4.00*

Courses

- Machine Learning
- Advanced Digital Image Processing
- Data Mining
- Deep Learning
- Natural Language Processing
- Advanced Linear Control Systems

BSc in Electrical Engineering
International Islamic University Islamabad

09/2020 - 06/2023 *3.53/4.00*

Courses

- Machine Learning
- Power Electronics
- Microprocessor and Microcontrollers
- Digital System Design

WORK EXPERIENCE

Associate Machine Learning Engineer
Herald Analytics

01/2024 - Present *Islamabad*

Achievements/Tasks

- Currently, working on different projects of Machine Learning and Deep Learning
- Gaining Hands on experience on different real world projects
- Getting used to some very important frameworks of machine learning and deep learning such as TensorFlow, PyTorch, Scikit-learn, Keras etc

Engineer Intern
PTCL

07/2022 - 09/2022 *Rawalpindi*

Achievement/Task

- Opportunity to interact with professionals from different departments, participate in team projects, and attend meetings or events to gain a comprehensive understanding of PTCL's operations and corporate culture.
- Gained practical experience, industry exposure, and a deeper understanding of the telecommunications sector.
- Created reports and documents as requested by the manager.

TECHNICAL SKILL SET

Python | Visual studio | HTML | MongoDB | GPU Programming (CUDA) | MATLAB/Simulink | QGIS | MS Office suite (Professional level)

ACADEMIC PROJECTS

Solar Potential Estimation using Satellite Images (07/2024 - Present)

- Utilizes satellite imagery to identify and assess rooftop areas for solar energy potential for the city Islamabad.
- Integrates machine learning models to automate building detection and calculate solar exposure.
- Employs geographic information systems (GIS) to analyze solar radiation and provide monthly potential estimates.
- Aims to support renewable energy initiatives by optimizing solar panel installation on detected rooftops.

Brain Tumor Detection using seg-former (05/2024 - 06/2024)

- Seg-former is used to perform semantic segmentation
- The project trains on brain MRI datasets with labeled tumor regions to enhance detection and localization.

Performance Enhancement of E-Bikes using ML (03/2024 - 05/2024)

- This Project aims to develop a software which would guide the rider about the battery health, range/km as per the current battery.
- Using Regression model to get desired outputs.
- Made a user friendly web application.
- Enabling the app to fetch real time data.
- Rea-time monitoring and storing of data in a database and then training the model to give hardware improvement suggestions

Final Year Project-Automatic Positioning of Solar Panel Using Mobile App. (09/2022 - 06/2023)

- Presents an innovative solution that automates the positioning of solar panels through a user-friendly mobile application, leveraging advanced algorithms and sensors to optimize energy generation.
- Mobile App made by using latest android language i.e Kotlin.
- The system improved solar energy capture by 40%, and the mobile app interface increased user accessibility and control.

Chatbot using Python (06/2023 - 06/2023)

- the project aims to develop a simple chatbot using chatterbot library which was able to provide assistance regarding the order to the customer.

PUBLICATION

Fruit Classification using Image Processing (IEEE-IICAIET) (03/2024 - 07/2024)

This Project aims to develop a software which would automatically sort out the fruits on the basis of quality using CNN model.