Profile

As a recent graduate of computer software engineering, passionate about data science, I bring a solid foundation in data preprocessing, visualization, machine learning, statistical modeling, and model deployment. I have a deep understanding of theoretical concepts and a strong drive to provide innovative solutions for complex data challenges.

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Charsadda

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Language

- **English**
- **Urdu**
- **Pashto**

Muhammad Uzair

Software Engineer

Education

BS Computer Software Engineering (2019 - 2023)
University of Engineering and Technology, Mardan

HSSC (2017 - 2019)
The Peace Group of Schools and Colleges, Charsadda Campus

SSC (2015 - 2017)
Al-Huda Public High School, Nisatta Charsadda

Skills

- Programming Languages (Python, Javascript, C, C++)
- Data Preprocessing (Cleaning, Feature Scalling, normalization etc.)
- Power BI
- Machine Learning Algorithms: Linear Regression, KNN, Logistic Regression, Naive Bayes, SVM, Decission Tree, Random Forest and all Ensimble techniques etc. (Scikit-Learn)
- Statistics and Probability (Probability theory, hypothesis testing, inference)
- Model Evaluation and Selection (Cross-validation, performance metrices, model selection)
- Feature Engineering (Feature selection, extraction and transformation)
- Data visualization (Maplotlib, Seaborn)
- Deep Learning: ANN, CNN, RNN etc. (Tensorflow, Keras, OpenCV)
- Natural language processing (NLTK)
- Database Design (MYSQL, PostgreSQL)
- Model Deployment using FastAPI, Flask

Additional Skills

- Full Stack Web Development (HTML, CSS, JS, Reactjs, FastAPI, Flask Microservices concept, docker)
- Web Scrapping (BeautifulSoup4)
- OOP Concepts
- Data Structure and Algorithms
- Problem Solving (Analytical, Data-driven approaches)
- Collaborative Skills(Teamwork, Communication, Presentation)

Tools and Libraries

C, C++, HTML, CSS, Javascript, React, Python, Numpy, Pandas, Seaborn, Matplotlib, scikit learn, Tensorflow, Keras, Pytorch, nltk, OpenCV, FastAPI, Flask, Postgresql, MySQL, BeautifulSoup4, Docker, Jupyter, Colab, Vs-Code, PowerBI

Projects

FYP Project:

Real-Time Sign Language Recognition with Deep Learning Approach:

Problem:

- Communication barrier between normal people and muted people.

Solution:

- Target 100 most common words of Urdu and collect videos of those words for Pakistan sign language.
- Clean the dataset and extract features for the videos and saved those features in .numpy arrays.
- Trained Sequentional models Like LSTM, GRU and LRCN.
- Integrate best-fit model with streamlit interface for real time sign translation.

Freelance Projects

- **Automate machine learning tasks:**
  - Develope web app which perform all preprocessing steps on data show ghraphs and train ml models on .csv datasets and also show confussion matrix corrleation matrix etc. to users.
  - User will give voice commands and application will perform that operations on dataset.
  - Users can download trained models in .pikkle files from application.
- **Chat bot using open AI Model**
  - Fine tune open-ai model on law dataset for chatbot.
  - Integrate that model in streamlit interface for questions answers.
- **Developed backend for social app in FastAPI**
  - This project was 3 modules
  - Orgainzations: organiztions posting jobs and will hiring people on basis of applications.
  - Professionals apply for job and internships and also can provide home services to visit for patient.
  - Patients can search oragnizations and doctor contact them.

Personal Projects

- **Human action recognition**
  - Used kaggle dataset and trained LRCN model on random 5 classes to reconize humman actions.
  - Achived 83% test accuracy on 5 classes.
- **Plants disease detection**
  - Trained models for tomato, photato, and pepper plants dataset for multiple disease detection in given plants.
  - Integrate those models in streamlit web interface and deploy application.
  - app link: https://plantdiseasedetectionappapp-7pvuh48449k.streamlit.app/
- **Human diseases detection**
  - Trained CNN models for pneumonia, malaria, and bone fractures on images usinng kaggle dataset.
  - App Link: https://humandiseasedetectionapp-w97gv5cgyc.streamlit.app/
- **Customer Churn Prediction**
  - Trained ANN model on Telcom_customer dataset and achived 92% accuracy to predict customer churn prediction.
- **AI Painter**
  - Using opencv and mediapipe libraries build AI painter to paint on screen using multiple colors.
- **AI Trainer**
  - Using opencv and mediapipe libraries build this project which is counting up down of dumbles.