Umer Hamid

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Personal Statement

I'm a Computer Science student with a keen interest in various tech fields, particularly passionate about AI and Machine Learning. Eager to face challenges and apply my knowledge to real-world problems, I'm dedicated to continuous learning and professional growth, aiming to contribute significantly to technological advancement.

Education

FAST NUCES Lahore, Punjab

Bachelor of Computer Science (CGPA: 3.42) *Sep. 2021 – June 2025*

Experience

Freelancing June 2023 – Present

Self-Employed

- Successfully delivered over 15 diverse projects to more than 10 clients, achieving complete client satisfaction through high-quality work and timely delivery.
- Gained a multifaceted perspective on problem-solving and enhanced technical skills by tackling a wide array of global projects, leading to significant professional growth.

Machine Learning Trainee January 2024

Soliton Technologies

- Engaged in a one-week AI in Biomedicine workshop, gaining expertise in Machine Learning principles, EDA, data cleansing, and preprocessing for biomedicine analytics.
- Advanced in feature engineering and model evaluation, exploring diverse machine learning algorithms for practical application in varying data scenarios.

Projects

PleadSmart: AI Chat-bot | *Python, Streamlit, Llama 3, Mixtral 8x22b, Vectara, Together AI* April 2024

- Developed an AI chat-bot for legal case analysis during lablab.ai's Advanced RAG Hackathon, leveraging cutting-edge language models like Llama 3 and Mixtral 8x22B. The chat-bot intelligently fetches similar case precedents from a Vectara corpus containing over 11,000 cases, streamlining case preparation and legal research
- Integrated the chat-bot into a user-friendly Streamlit UI, equipped with a precision-control slider to tailor the volume of relevant case precedents.

Alzheimer's MRI Scan Classification AI | *YOLOv8, ViT, BEiT, ImageNet, Python* March 2024 – Present

- Orchestrating a pivotal AI project to enhance early Alzheimer's diagnosis by categorizing MRI scans into four distinct stages of the disease, utilizing an amalgamation of advanced deep learning models such as YOLOv8, ViT, BEiT, and resnet50 coupled with LSTM techniques, to refine diagnostic accuracy, currently at 90% with aspirations to reach beyond 95%.
- Employing sophisticated image pre-processing and feature extraction techniques to emphasize subtle distinctions between disease stages, thereby addressing current state-of-the-art shortcomings, particularly in early-stage differentiation.

Cell Classification AI | *Hugging Face, YOLO, Python, Albumations, Transformers, pytorch* Febuary 2024

- Spearheaded a cellular image classification project for the Softec AI Competition aimed at the classification of cellular images into normal or mitotic categories, employing ViT, BEiT image transformers from Hugging Face, and YOLO v8, enhanced by an ensemble approach combining all three models for superior accuracy.
- Utilized Albumations for image augmentations to improve model robustness, contributing to a commendable 10th position in the competition with the highest model accuracy reaching 88.059%.

Stroke Prediction Model | *Python, NumPy, Matplotlib, Pandas, Seaborn, sklearn, Tensorflow* January 2024

- Directed a stroke prediction project, performing exhaustive EDA and advanced data preprocessing (null value imputation, normalization, scaling, encoding, outlier management) using Random Forest, SVM, Weighted SVM, Gradient Boosting, and SMOTE for high accuracy.
- Fine-tuned Random Forest model with Stratified K-Folds cross-validation, achieving 95.8% accuracy and 95.9% F1 score, showcasing exceptional model optimization and predictive capability.

Clueless Game | *Python, Podsixnet, Pickle, Pygame, Unittest, GitHub* December 2023

- Engineered a multiplayer Clueless game, integrating client-server architecture via PodSixNet for seamless communication and pickle for serialization, featuring sophisticated game mechanics for player actions and a dynamic lobby system for efficient game setup and management.
- Optimized the game's networking to ensure low latency and high throughput, making it robust and scalable.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres, MySQL), Assembly Language, HTML/CSS, PHP
Developer Tools: GitHub, VS Code, IntelliJ, Xampp, Vectara, Kaggle, Together AI, Google Colab