

Daniyal Umer Haral

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EDUCATION

Ghulam Ishaq Khan Institute

Bachelor of Science in Artificial Intelligence

- **GPA:** 3.1 / 4.0

KPK, Pakistan

September 2020 - June 2024

DeepLearning.AI TensorFlow Developer Professional

September 2023

WORK & LEADERSHIP EXPERIENCE

Dutch Doc Accessibility: AI-powered Q&A for the Disabled – Freelance Project

January 2024 – May 2024

- Developed an initiative for disabled individuals using Python, integrating OCR-based text extraction, language detection, advanced statistical analysis, and visualizations.
- Applied preprocessing and implemented GPT API for spell correction, reducing bad misspelled words by 80%.
- Deployed state-of-the-art Transformers for language translation, summarization, and question answering on Dutch legal documents using LangChain and Large Language Model (Bert) alongside Text-to-Speech and Speech Recognition models, enabling independent information retrieval for all users.

Software Development Intern – Techlogix

June 2023 – August 2023

- Spearheaded the implementation of ASP.NET Core expertise, emphasizing clean architecture and MVC patterns to develop highly maintainable codebases that reduced bug fixes by 40%.
- Engineered seamless RESTful API designs and optimized database management, to handle over 1000 concurrent users.
- Deployed on Azure and adeptly incorporated advanced chatbot features with pretrained models into web application, resulting in a significant 30% decrease in customer complaints, elevating user satisfaction.

Data Science Intern – Systems Ltd

July 2022 – September 2022

- Acquired Data Warehousing, SSIS, ETL techniques, and SQL skills. Created a pipeline to process 10,000 sales records.
- Harnessed Tableau to craft comprehensive dashboards, graphs, and maps, facilitating data-driven decision-making and saving 50 hours monthly in report generation.
- Implemented machine learning algorithms and conducted exploratory data analysis, delivering a predictive model with 90% accuracy.

ACADEMIC PROJECTS

Vehicle Categorization and Passenger Counting – Final Year Project

- Trained and fine-tuned YOLO model on a dataset of 10,000 images, achieving 80% mAP for identifying 7 Pakistani vehicle classes. Annotated 600 images for passenger counting, with YOLO reaching a 65% mAP. Integrated solution with HIKVISION CCTV system.
- Created a responsive web app using React and Django, featuring an interactive dashboard for real-time monitoring of vehicle and passenger influx. RTSP for seamless CCTV connection.

ResearchifyBot – Individual Project

- Crafted a RAG chatbot utilizing Python, LangChain and Llama Index with OpenAI's GPT-3.5 turbo model, facilitating research paper question answering and summarization. A time-saving tool for researchers, facilitating efficient analysis
- Leveraged Streamlit for UI development, featuring conversational history tracking

Dino Game with Custom NEAT Algorithm – Group Project

- Constructed Python Dino Game with custom NEAT Algorithm, including feed-forward neural network and genetic algorithm for weight optimization coded from scratch, achieving game mastery by the dino in 60 generations, as part of a deep learning project using Pygame.

Exploratory Data Analysis

- Datasets Analyzed: CIFAR-10, Pak-Wheels, Play Tennis, Breast Cancer, Titanic, Iris, Corn or Maize Leaf, Airbus Aircraft Detection, Movie Reviews, Twitter Tweets, UNSW NB15, Insurance, Balance Scale.

Algorithms Implemented From Scratch

- AI Algorithms: Linear Regression, Logistic Regression, Decision Trees, K-mean Clustering, SVM, ANN, CNN, RCNN, GAN, LSTM, Transformers, Sort Algorithm: Bubble Sort, Insertion Sort, Merge Sort, Quick Sort Search Algorithms: Breath First, Depth First, A-star Other: Huffman Encoding, Minimax.

SKILLS & INTERESTS

Technical Skills: Python | JavaScript | HTML | CSS | SQL | ASP.Net Core | C# | C++ | Git | Linux | AWS | Docker | RESTful APIs | Machine learning | Deep learning | NLP | CV | RL | Web Development | Mobile App Development | DW | SSIS | ETL

Interests: Tennis | Football | Swimming | Chess