Hasham Akram

Data Scientist hashamakram50@gmail.com | LinkedIn |Github | Protfolio

Experienced Data Scientist with a strong background in Machine Learning, NLP, Compurter Vision and Generative AI. Aptitude towards energetic and innovative collaborations includes internships and apprenticeships in data science, where I leverage Deep Learning, Cloud Deployment ,Vector db & LLM frameworks expertise in internships, and tackled real-world problems. Driven by a passion for AI and its potential, I aim to utilize my skills for impactful solutions while continuously learning.

Professional Experience

iNeuron.ai Jan 2024 - Feb 2024

Data Science Intern

Overview: Developed an energy efficiency model leveraging Python, Cassandra, and AWS (EC2). Utilized Multi-output Regressor Models for energy consumption analysis and optimization. Contributed to data preprocessing and cleaning

Technologies: Python, Cassanndra, AWS (EC2)

Outcome: Achieved a 40% improvement in energy efficiency through predictive modeling, enabling data-driven decision-making for enhanced energy management, construction, and structure planning.

CodeSoft Mar 2024 - Apr 2024

Machine Learning Engineer

Churn Prediction (Random Forest): Developed a model with 85% accuracy, reducing churn by 20% and saving $500,000 annually.

Spam Classifier (Logistic Regression + NLP): Achieved 95% precision and 92% recall, enhancing email efficiency.

Fraud Detection (ML Algorithms): Attained 98% accuracy, leading to a 30% decrease in fraudulent transactions, saving $1 million yearly.

Personal Projects

Chicken Disease Classification webapp using Deep Learning

- **Overview**: This project implements a web application for classifying chicken diseases using deep learning image recognition. The application leverages Keras' pre-trained VGG-16 model built upon TensorFlow to achieve high accuracy in disease detection.
- **Technologies:** TensorFlow & Keras, Dockers, AWS (EC2/ECR) and Azure with CI/CD.
- **Outcome:** The web application effectively identifies healthy and Coccidiosis-infected chickens based on their fecal images, achieving a classification accuracy of 96% with a loss of 0.128.

Kideny disease (MRI) multidisease Classification Using Deep Learning

- **Overview**: This project implements a web application Utilizing DVC for tracking and MLflow for experimentation through Dags Hub, we established a robust infrastructure. Our primary focus was on implementing the VGG16 Keras model for precise classification of multiple kidney diseases from MRI images.

- **Technologies:** TensorFlow & Keras, MLflow, DagsHub, Dockers, AWS (EC2/ECR) and Azure with CI/CD.
- **Outcome:** Model Identifies healthy and Diseased Kidney based on their MRI images, achieving a classification accuracy of 80% with a loss of 0.38.

Next Word Prediction Using Bidirectional LSTM - Webapp

- Developed a Next Word Prediction model utilizing advanced NLP techniques.
- Achieved an impressive accuracy rate of 86% through the implementation of Bidirectional LSTM architecture.
- Enhanced user experience in text prediction applications, showcasing expertise in NLP and deep learning methodologies.

Text to SQL LLM App using Gemini Pro

- **Overview:** Created a streamlit app to convert natural language queries into SQL commands using Gemini Pro, improving database accessibility for non-technical users.
- **Technologies:** Google Gemini Pro, sqlite3, Streamlit
- **Outcome:** Reduced query formulation time by over 60%, ennhancing productivity for users.

Advance Q&A Chatbot with Pinecone and OpenAI's leveraged by Langchain Framework

- **Overview**: Engineered chatbots that provide accurate, context-aware answers by integrating Pinecone Vector Database with vector embbedding techniques using Langchain LLM integration architecture.
- **Technologies:** Pinecone, OpenAI API, Langchain, Vector Embeddings, retrieval Q&A
- **Outcome:** Achieved a 50% reduction in need for human intervention in customer service inquiries, improving response accuracy and user satisfaction.

Skills

- **Programming Languages**: Python, C++
- **Frameworks & Tools**: TensorFlow, LangChain, Llama Index, Streamlit, Flask, Fast API, Gradio
- **Generative Al Technologies**: Open-source and paid LLM models (Hugging Face, Llama2, Mistral, OpenAI, Google Gemini Pro)
- **Vector Databases**: ChromaDB, Pinecone
- **Database Management**: Experience with DataStax Cassandra DB in production environments, MySQL, Mongodb
- **Deployment Platforms**: AWS Bedrock, AWS (EC2), Azure
- **AI/ML Techniques**: Fine-tuning with custom data, vector embedding, NLP, neural network optimization, MLOPS(Git, CI/CD, Github Actions, MLFlow, DVC), Dockers, Kubenetes
- **Soft Skills**: Analytical thinking, problem-solving, teamwork, effective communication

Education

Bachelor of Science (BS) - Physics Sep 2019 - Aug 2023

Govt. College University, Faisalabad

Achievement

- Participated in the Xeven Solutions AI Hackathon (2023)

- Contributing to team during the Hope to Skill AI Course at Xeven.ai (present)
- Completed the Machine and Deep Learning Specialization by Andrew Ng (2024)