

Iftikhar Ul Hassan

Machine Learning Engineer

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Experience

Ayass Bioscience Inc | Machine Learning Engineer

June 2024 - Nov 2024

- Developed ML models on transcriptome data to predict gene–disease associations, improving biomarker discovery.
- Created models using these gene expressions to perform predictions that identify gene-disease associations.
- Conducted biomarker identification, finding genes linked with specific diseases.

Convergent Business Technologies | Data Analyst Intern

Feb 2024 - March 2024

- Acquired a solid proficiency in Python programming through hands-on experience solving real-world problems.
- Expanded skills into data manipulation and analysis using libraries like NumPy and Pandas.
- Complemented this knowledge with proficiency in SQL for comprehensive data handling.
- Proficient in statistical learning, with expertise in developing and implementing linear regression models and applying classification algorithms for data-driven insights and accurate pattern recognition.

Projects

- **Doc Helper: AI-Powered Document QA (RAG) – Streamlit, LangChain, OpenAI (2025)**: Developed a Retrieval-Augmented Generation (RAG) Streamlit application for interactive question answering on uploaded PDF documents. Automated document ingestion and chunking, embedded content for semantic search using LangChain and OpenAI, and designed a user-friendly interface enabling users to query document knowledge efficiently.
- **AI-Powered YouTube Video Helper (RAG): Streamlit, LangChain, OpenAI (2025)**: Developed a Retrieval-Augmented Generation (RAG) Streamlit app for interactive QA on YouTube videos. Automated transcript retrieval and chunking, embedded video content for semantic search using LangChain and OpenAI, and designed an intuitive UI for users to query video knowledge in multiple languages
- **AI-Powered LinkedIn Post Generator: Streamlit Llama3.2 (2025)**: Built a Streamlit app using Llama 3.2 to automate LinkedIn content creation. Scraped high-engagement posts, processed them via LLM to extract metadata (line count, language, tags), and designed an interactive UI for users to generate tailored posts by selecting topic, length, and language.
- **Restaurant Idea Generator: A Region-Based Culinary Concept App(2025)**: Developed an interactive Streamlit web app that leverages OpenAI's LLM to generate culturally tailored restaurant names and menus for Pakistani regions. Designed a dynamic UI with region-specific inputs, integrated API calls for real-time AI-powered suggestions, and deployed the app, showcasing expertise in prompt engineering and generative AI.
- **Movie Recommendation System with User Authentication and Web Interface (2024)**: Developed a movie recommendation system with collaborative filtering. Built a Streamlit web interface for user registration, login, and recommendations. Enhanced user experience by allowing movie additions from recommendations and displaying them in a table. Improved UI with better colors, alignment, and animations using HTML and CSS.
- **Emotion Analyzer: A Web App for Text-Based Emotion Detection(2024)**: Created an interactive web application using Streamlit and machine learning to analyze emotions from user input text. Leveraged a Support Vector Machine (SVM) model with TF-IDF vectorization for accurate emotion classification. Designed an engaging user interface and deployed the app on Heroku, demonstrating expertise in natural language processing, machine learning, and web development

Certifications

- **Coursera: Supervised Machine Learning: Regression and Classification**: Completed a Coursera course, "Supervised Machine Learning: Regression and Classification". Learned about Machine Learning, Linear Regression and Logistic Regression In Depth.
- **Coursera: Advanced Learning Algorithms**: Completed a Coursera course, "Advanced Learning Algorithms." Learned to build neural networks for multi-class classification, ensure model generalization, and implement decision trees, random forests, and boosted trees.
- **Coursera: Machine Learning with Python**: Completed a Coursera course, "Machine Learning with Python". Learned about regression, k-nearest neighbors, decision trees, and regression trees using the Scikit-learn library.

Skills Summary

- **Languages and Tools::** Python, SQL, Scikit-learn, TensorFlow, Keras, Pandas, NumPy, Matplotlib, Streamlit, Seaborn, Git
- **Specializations::** NLP, Recommendation Systems, Generative AI, Data Analysis, Predictive Modeling

Education

- **National University Of Science and Technology (NUST)**
Bachelors in Computer Engineering;

Islamabad
Sep 2019 - June 2023