Ahmed Raza

ahmedraza312682@gmail.com 03022011625 in/ahmvd github.com/ahmed2402

SUMMARY

Motivated and detail-oriented Computer Science undergraduate with hands-on experience in front-end development, machine learning, natural language processing, and generative AI. Proven ability to build and deploy real-world AI/ML projects, including sentiment analysis tools, predictive models, and Retrieval-Augmented Generation (RAG)-based chatbots. Skilled in modern web technologies like Angular, along with strong Python proficiency for data-driven applications. Adept at problem-solving, fast learning, and collaborating within cross-functional teams. Actively seeking opportunities to apply technical skills to impactful software, data science, and AI solutions.

EXPERIENCE

Development Intern

CSIT Department - NED **January 2025 - Present, Karachi**

- Collaborated with the department's tech team to develop and maintain internal web applications.
- Focused on front-end development using **Angular** and **MySQL** for dynamic and responsive interfaces.
- Assisted in improving user experience and optimizing UI performance for internal platforms.
- Participated in **code reviews, testing, and documentation** to ensure high-quality deliverables.

AI/ML Intern

NCL - NED **June 2025 - August 2025, Karachi**

- Developed multiple machine learning projects including, and a **Unit Consumption Predictor** using **Time Series Analysis, Customer Churn Prediction** and **Loan Approval Predictor.**
- Built and deployed NLP-based applications such as a **Music Sentiment Analysis** Tool and the **Resume Analysis Hub.**
- Applied techniques like **feature engineering, model evaluation, and performance optimization** across various datasets.
- Collaborated with cross-functional teams to integrate models into user-friendly interfaces and dashboards.

PROJECT

ARIA – Agentic Resume Intelligence Analyzer

1st Place Winner – NED DataQuest Hackathon 2025 • github.com/ahmed2402/Agentic-Resume-Intelligence-Analyzer-ARIA

- Built a **multi-agent RAG-based AI career assistant** integrating resume analysis, ATS checking, and interview preparation into one intelligent system.
- Designed an **Agentic Resume Matcher** pipeline using LangGraph that evaluates resume–JD similarity, generates insights, and produces tailored CVs dynamically.
- Developed an **ATS Checker** with Prefect orchestration to assess formatting, keyword optimization, and structure using NLP-driven scoring.
- Created a **Hybrid RAG-based Interview Prep Chatbot** supporting contextual Q&A, follow-up handling, and domain-specific guidance.
- Added a **Mock Interview Analyzer** using voice input (Groq+ Sentiment Analysis) to assess confidence, clarity, and keyword relevance for spoken answers.

Unit Consumption Predictor

NCL - NED

- Developed a **time series forecasting model** for the **NCL HPPC building** to predict electricity unit consumption for the upcoming month using historical data from the last **5 years**.
- Implemented **best practices in time series analysis**, including trend/seasonality detection, data preprocessing, and evaluation metrics for accuracy.
- Applied advanced forecasting models such as **SARIMA** and **Holt's Winter Exponential Smoothing** to capture seasonal patterns and improve prediction performance.
- Designed for practical deployment, enabling facility managers to make data-driven energy planning and optimization decisions.

CSIT-RAG Chatbot (In Development)

CSIT - NED

- Designed and currently developing a **departmental chatbot** for the CSIT department to handle diverse queries related to admissions, examinations, and general departmental information.
- Implemented **Retrieval-Augmented Generation (RAG)** using **LangChain** to enable accurate and context-aware responses from structured and unstructured departmental data.
- Leveraged advanced techniques like **Knowledge Graph integration** to improve query understanding and information retrieval.
- Applied **best practices in optimization**, reducing the chatbot's **average response time to 3–4 seconds**, ensuring a smooth user experience.
- Built with scalability in mind to allow integration with departmental portals and dashboards for broader accessibility.

Loan Prediction System

github.com/ahmed2402/Loan-Prediction.git

- Developed a machine learning model to predict loan approval status based on applicant details.
- Utilized classification algorithms like **Logistic Regression**, **Random Forest**, and **XGBoost** for high accuracy.
- Performed data **preprocessing**, including handling missing values and encoding categorical variables.
- Built a user-friendly interface to input applicant data and display real-time predictions.
- Aimed to assist financial institutions in making faster and data-driven loan decisions.

CERTIFICATIONS

Microsoft Certified: Azure AI Fundamentals

2025

Artificial Intelligence (Machine Learning; Deep Learning; Communication)

NAVTCC

Certified Data Scientist

People's IT Program (PITP) • 2025

SKILLS

Frontend Development: Angular, HTML, CSS, JavaScript, TypeScript, Tailwind CSS
Backend Development : Flask, MySQL
Data Science & Machine Learning: Python, NumPy, Pandas, Seaborn, Matplotlib, Scikit-learn, PyCaret, OpenCV, Streamlit, LangChain, HuggingFace, RAG
Tools & Platforms: Git, GitHub

EDUCATION

Bachelor of Science in Computer Science and Information Technology

NED University • Karachi • 3.93 CGPA