Muhammad Usman Saeed

Jr. Full Stack Developer & Artificial Intelligence Engineer

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Areas of Expertise

Software Development - Web Application Development - Mobile Application Development - Computer Vision - Natural Language Processing (NLP) - Machine Learning - Deep Learning - Generative AI

Skills

- **Programming Languages:** Python, JavaScript, TypeScript, SQL, C++, Dart.
- **Frontend Development:** HTML/CSS, Tailwind CSS, ReactJS, Flutter.
- **Backend Development:** Node.js, Express, NestJS, Flask, FastAPI, Firebase, AWS, REST APIs, GraphQL, SQL/NoSQL.
- **Databases:** MySQL, PostgreSQL, MongoDB.
- **Tools:** Git/GitHub, Docker, VS Code.
- **Frameworks & Libraries:** NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, PyTorch, OpenCV, YOLO, Hugging Face, NLTK, LangChain.

Experience

Full Stack Developer, *(CHI Tech)* **Islamabad, Pakistan** *7/2024 - 8/2024*

- Designed and developed a truck logistics platform using NestJS and Flutter, enabling users to post truck requirements with pickup and drop-off details.
- Implemented a driver response system, allowing truck drivers to accept or bid on requests, similar to ride-hailing service workflows.

Data Analyst Intern, *(Jazz)* **Islamabad, Pakistan** *12/2022 - 11/2023*

- Utilized Python programming skills to develop automated solutions, and streamlined data analysis, reducing processing time by 30%.
- Conducted data analysis to drive business insights, leveraging data to inform decision-making and support organizational objectives.

Projects

- **LitterCam AI - AI-Powered Vehicle Litter Tracker**
  - Developed a computer vision system using YOLOv8 for real-time detection of litter and vehicles, ensuring accurate tracking in various environments.
  - Integrated EasyOCR to recognize and extract license plate information from the detected vehicles involved in littering incidents.
  - Designed a mechanism to identify the vehicle closest to the litter for efficient tracking and association of license plate details.
- **WebChat - Q&A web app with live site data**
  - Built a web application that allows users to input a website link and perform question-answering based on its content.
  - Utilized LangChain and Google Gemini API for advanced natural language processing and contextual understanding.
  - Developed a Flask-based backend for seamless integration of the AI model and efficient processing of user queries.
- **Project Management System**

- Developed a project management system using the MERN stack (MongoDB, Express, React, Node.js) to enable efficient project tracking and collaboration.
- Implemented features for users to create, assign, and manage tasks, ensuring smooth workflow within teams.
- Styled the application with Tailwind CSS for a responsive and modern user interface.

- **Expense Tracker**
  - Engineered a dynamic financial tracker with real-time data visualization using MERN stack.
  - Integrated income and expense categorization with historical trend analysis.
  - Streamlined data management with MongoDB, enhancing transaction retrieval efficiency.
- **Chat Application**
  - Built a real-time chat application using Flutter and Firebase, enabling instant messaging between users.
  - Integrated Google authentication to provide seamless login and secure user management.
  - Implemented push notifications to keep users informed of new messages and activity in real-time.

Education

Bachelor of Science in Computer Science, *Bahria University Islamabad* *Graduated January 2025*
CGPA: 3.40/4.00
Relevant Coursework: Object Oriented Programming, Data Structures & Algorithms, Database Management Systems, Design Analysis and Algorithms, Parallel and Distributed Computing, Artificial Intelligence.

Online Courses & Certifications

- Deep Learning Specialization - DeepLearning.AI
- Machine Learning Specialization - Stanford University, DeepLearning.AI
- AWS Academy Cloud Architecting - AWS
- Introduction to Git and GitHub - Google