Hassan Abbas

2 Karachi, Pakistan

+92-3122215921



hassanabbasq220@gmail.com



hassan-abbas-848549209

Summary

Software Design Engineer with experience modernizing applications and refactoring legacy code using Quarkus, Flask, and Vue. Skilled in building scalable systems, developing Al-powered solutions with FastAPI, Numpy, Pandas, Scikit-Learn and LangChain, optimizing performance and creating ML pipelines. Certified in LLM-powered applications, Data Science, and AWS, with a strong passion for continuous learning.

Education

Bahria University, Karachi, Pakistan

July 2023

Bachelors in Computer Engineering

Skills

MySQL

Agile methodologies

Quarkus Java

Python

LangChain

Vue JavaScript

Scikit-Learn

Flask

FastAPI

Professional Experience

Software Design Engineer | TeReSol.pvt.ltd

Nov 2023 - Present

Karachi, Pakistan

- Collaborated on transforming legacy systems to microservices using Quarkus, optimizing application performance on Vue.js, Flask, and Quarkus platforms.
- Contributed to engineering frontend and backend APIs, achieving latency reduction through Dockerized deployments and code refactoring.
- Assisted in revamping legacy Java systems into Quarkus microservices, facilitating modular scalability and enhancing maintainability.
- Participated in developing and delivering RESTful APIs (Flask/Quarkus) and Vue.js dashboards, accelerating transaction speeds and
- boosting user productivity.
- Supported Docker implementation for deployment in an on-premises cloud environment, ensuring seamless integration and scalability.

Freelancer Google Analytics and Tag Manager

2021-2023

Remote

- Utilized Google Analytics, Looker Studio, & Tag Manager to deliver data- driven insights for clients, improving decision-making and campaign ROI.
- Collaborated with cross-functional teams to deploy tracking solutions, enhancing client performance.
- Successfully completed projects on Fiverr/Freelancer with 100% on-time delivery.

Projects

RAG Chatbot

Vue.js | FastAPI | LangChain

- Developed a context-aware conversational AI chatbot using LangChain, FastAPI, and Vue.js
- Designed a modular 5-stage workflow (Query → Pre-Processing → Resource Validation → Response Generation → Clarification) reducing API calls by 30%
- Integrated LangChain components (RunnableBranch, LLMChain) to enhance dynamic logic control and response precision
- Implemented proactive clarification logic that resolved over 10% of ambiguous queries.
- Planned future enhancements including PostgreSQL-based cost optimization, real-time web search integration, and AWS migration

Twitter Sentiment Analysis

Tensorflow | nltk | pandas | numpy | Scikit-Learn

- Preprocessed and cleaned Twitter data for sentiment analysis.
- Implemented text vectorization using TF-IDF, Word2Vec, and GloVe.
- Trained and evaluated machine learning models on the vectorized data.
- Analyzed classifier effectiveness identifying the best-performing combination.
- Compared model performance across different vectorization techniques.

ATM-External State Machine

Quarkus | Microservices

- Contributed to engineering services, harnessing state design pattern for the development of these services.
- Participated in developing 5+ critical services: Mini-Statements, UBPS, Credit-Card Payments, Demand Draft, and Customer Address Change.
- Collaborated with Stakeholder for the development of these services

IFRS9

Vue.js | Flask | Quarkus

- Contributed to engineering frontend and backend APIs, achieving latency reduction through Dockerized deployments and code refactoring.
- Participated in developing and delivering RESTful APIs (Flask/Quarkus) and Vue.js dashboards, accelerating transaction speeds and boosting user productivity.
- Collaborated with Stakeholder implementing Agile methodologies to understand and develop requirements.
- Developed with Stakeholder implementing Agile methodologies to understand and develop requirements.

Certificates (Clickable Links 🔗)

AWS Educate Introduction to Cloud 101

AWS Educate Machine Learning Foundations

LangChain in Action: Develop LLM-Powered
Applications

SQL For Data Science
Sampling in Python
Data Communication Concepts

Ownership, Accountability and Responsibility - Certificate of Zest - Zest Experience