S. M. HASSAN ALI
SOFTWARE ENGINEER- BACKEND/FULLSTACK

+92 3353215848 | syed007hassan@gmail.com | linkedin.com/in/syedmuhammedhassanali8
github.com/Syed007Hassan | medium.com/@syed007hassan | Karachi, Pakistan

EDUCATION

Bachelor in Software Engineering
2020 - Present, Karachi, Pk
FAST-NUCES
CGPA: 3.67

WORK EXPERIENCE

Software Developer Intern
6/2023 - 9/2023, Karachi, Pk
ONE Technology Services, USA

- Developed modular **REST APIs** in **Flask** and **Express** to power a chatbot, enhancing integration and flexibility.
- Implemented and harnessed the power of Google's **BARD API** to revolutionize the chatbot's natural language processing capabilities, resulting in a 40% increase in user satisfaction and a 50% reduction in response time.
- Deployed APIs on Microsoft **Azure App Service,** ensuring internet accessibility for the chatbot.
- Built an end-to-end chatbot using Flask with a clean MVC architecture, ensuring maintainable code.
- Seamlessly integrated the chatbot with **.NET APIs** for efficient cross-system interactions.
- Created an intuitive **Angular** chatbot interface that connected seamlessly to the Flask backend.
- Integrated the chatbot with an **ERP system**, enabling data querying and actions for users.
- Established vendor communication via email using Google's **Palm API**, streamlining order placements.
- Automated the process of order emails and invoice generation using SMTP, improving efficiency.
- Utilized the Palm API for **PDF vectorization** and implemented semantic search in a **ChromaDB** database for quick and accurate answers to user queries.

PROJECTS

Chat To Your Database (NestJs, NextJs, ExpressJs, PostgreSQL, Redis, MongoDb, Docker, OpenAI)

- Utilized **LangChain** to develop a **NextJs** application empowering users to perform **database queries** using NLP.
- Implemented a **SQL query generator** that seamlessly executes queries on connected schemas via **TypeORM**.
- Used **MongoDB** to maintain the history of recent prompts, generated SQL queries, and data retrieved from the queries in the sidebar component.
- Successfully **migrated** the ExpressJS project to **NestJS**, enhancing the performance of the SQL Agent component.
- Containerized each service using **Docker Compose**, for quick setup and deployment.
- Fostered collaboration and **open-source** development by contributing the project to **Hacktoberfest'23**.

Restoring Database Using Dockerode (NestJs, PostgreSQL, Docker)

- Engineered an automated solution using **Dockerode** and **Docker Remote API** for seamless PostgreSQL **database restoration**, reducing manual intervention in multi-container setups.
- Utilized **Docker daemon** socket and Dockerode to streamline **container commands**, showcasing expertise in containerization concepts and efficient service communication
- Developed a concise API with Dockerode, enabling one-off command execution within containers for effective management and restoration of **SQL database dumps**.
- Improved the development workflow by handling the complexities of **volume mounting**.

ACHIEVEMENTS

DEAN'S HONOR LIST/MEDALS

- Received **Dean's Honor List** in Fall 2020, Spring 2021, Spring 2022, and Fall 2022 Semesters
- Awarded the **Gold Medal** for achieving the highest GPA in the Fall 2020 semester.
- Received the **Silver Medal** for achieving the second-highest GPA in the Spring 2022 semester.
- Selected by **Microsoft for Startups** Founders Hub by pitching FYP idea.

SKILLS

Technical Skills: JavaScript/TypeScript, Python (Flask), NodeJS (ExpressJS/NestJS), REST API, GraphQL, MySQL, PostgreSQL, MongoDB, Redis, ReactJS, NextJS, Angular, Git, Docker, AWS, Azure, Azure DevOps, CICD, Unit testing
Interest: System Design, Distributed Systems, DevOps, Open-Source Projects, Microservices, Generative AI

CERTIFICATES

Azure Fundamentals (10Pearls Uni), **NodeJS** (HackerRank), **Intro to Generative AI** (Google Cloud), **SQL** (HackerRank)
Problem Solving (HackerRank), **Docker Training** (KodeKloud)