S. M. HASSAN ALI

**S O F T W A R E E N G I N E E R - B A C K E N D / F U L L S T A C K**

+92 3353215848 | [syed007hassan@gmail.com](mailto:syed007hassan@gmail.com) | [linkedin.com/in/syedmuhammedhassanali8](https://www.linkedin.com/in/syedmuhammedhassanali8/) [github.com/Syed007Hassan](http://github.com/Syed007Hassan) | [medium.com/@syed007hassan](https://medium.com/%40syed007hassan) | Karachi, Pakistan

# EDUCATION

## Bachelor in Software Engineering

2020 - Present, Karachi, Pk

[FAST-NUCES](https://www.nu.edu.pk/) CGPA: 3.67

# WORK EXPERIENCE

## Software Developer Intern

[ONE Technology Services, USA](https://onetechnologyservices.com/)

6/2023 - 9/2023, Karachi, Pk

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,](https://github.com/Syed007Hassan/Chat-To-Your-Database) Docker, [OpenAI)](https://github.com/Syed007Hassan/Chat-To-Your-Database)

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)](https://github.com/Syed007Hassan/Restoring-Database-Using-Dockerode)

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](https://10pearlsuniversity.org/view-certificate/?cid=10PUC-f0dd37c1705c56b054629d25583903bf96d722224d6ec1e259834700)), [**NodeJS**](https://www.hackerrank.com/certificates/688eabce51d2) ([HackerRank](https://www.hackerrank.com/certificates/688eabce51d2)), [**Intro to Generative AI**](https://www.cloudskillsboost.google/public_profiles/6659121b-bc1f-44ae-a237-9742c898c290/badges/4066623) ([Google Cloud](https://www.cloudskillsboost.google/public_profiles/6659121b-bc1f-44ae-a237-9742c898c290/badges/4066623)), [**SQL**](https://www.hackerrank.com/certificates/381ed86b5906) ([HackerRank](https://www.hackerrank.com/certificates/381ed86b5906))

[**Problem Solving**](https://www.hackerrank.com/certificates/5b3f1a24a128) ([HackerRank](https://www.hackerrank.com/certificates/5b3f1a24a128)), [**Docker Training** (KodeKloud)](https://kodekloud.com/certificate-verification/2D1207346543-2D12012FDEA1-2D12010154F5/)