

Salva Mol K M

Software Engineer

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SUMMARY

Software Engineer with 2+ years of experience in backend development and API design. Proficient in **Python, FastAPI**, and **Generative AI**, with expertise in **RAG** architectures, **LangChain**, and **Prompt Engineering**. Skilled in working with both **SQL (PostgreSQL)** and **NoSQL (MongoDB)** databases. Passionate about building scalable, AI-driven applications and contributing in Agile environments. Recognized for Innovation, Customer, and Pursuit of Excellence in software development.

SKILLS

Programming Languages: Python, C, SQL, HTML, CSS, Cypher Query Language

Generative AI: LangChain, LangGraph, RAG (Retrieval-Augmented Generation), CAG (Cache-Augmented Generation), Prompt Engineering, LLMs, Fine-tuning Models

AI Tools & APIs: Google Gemini, Azure OpenAI

Databases: PostgreSQL, MongoDB, MySQL, Redis, Neo4j, Milvus(Vector Databases)

Frameworks: FastAPI, Streamlit, .NET

Cloud Platforms: Microsoft Azure (Azure AI Search, Azure Blob Storage)

Other: REST API Design, Agile (Scrum), Jira

WORK EXPERIENCE

Software Engineer

Rockwell Automation Company

05/2023 - Present | Bengaluru, India

- Implemented **Generative AI and LLM-based automation solutions**, leveraging **Retrieval-Augmented Generation (RAG)** for contextual response generation.
- Designed and implemented **agent and tool orchestration architectures** using **LangChain** to enable dynamic, multi-step task execution.
- Developed and optimized **RESTful APIs** using **Python (FastAPI)** and **C# (.NET)** to deliver scalable backend systems.
- Designed and managed **PostgreSQL** and **MongoDB** databases to support high-performance data processing.
- Improved system efficiency and reliability through **code optimization, API modularization, and data-driven architecture** enhancements.
- Collaborated in an **Agile (Scrum)** environment, using **Jira** for sprint tracking and task management.

PROJECTS

○ RA Gen AI Team

- Currently leading a proof-of-concept (POC) for a **GenAI-driven chatbot** that dynamically interacts with **SQL** databases to answer complex, data-dependent queries. Conducting research and prototyping solutions using **SQL agents, query decomposition, and retrieval-augmented techniques** to handle multi-step and context-rich questions.
- Worked on a use case called “**D2R Sales Enablement Chatbot**,” a **document-trained conversational assistant** designed to provide contextual responses with **memory, recommendation, and document reference capabilities**.
- SARA (Sales Account Research Assistant):** Contributed to a **dual-chatbot platform** with a built-in **research tool** for automated account intelligence. Developed a **web scraping module** integrated with **LLM reasoning** to extract and summarize company insights. Built **two task schedulers** to automate data refresh and processing and created a **document-trained static chatbot**.
- LLM Foundation:** Built a **centralized GenAI platform** for shared logic and **reusable agents**, enabling faster development across **multiple business units**. Developed modules for **session handling, use case onboarding, and billing integration**, improving developer onboarding time by **50%**.
- Gray Market Prediction:** Developed a chatbot interface that interprets natural language queries and visualizes results by fetching and analyzing data from a **Neo4j graph database**.

- Contributed to **backend development** across all use cases using **Python (FastAPI)** to build **RESTful APIs**, along with modules for **authentication, session management, user handling, and database integration**.

- **HCCB**

- **MSP:** Enhanced existing APIs and developed new **RESTful APIs** based on business requirements using **C and .NET**, leveraging **SQL Server stored procedures** for high-performance backend processing.
- **EDI:** Contributed to the existing portal by adding new features and improving existing APIs. Built **RESTful APIs** using **C/.NET** and integrated UI components with **ASPX** and **AngularJS**.

- **CPCR – RTDMS**

- Contributed to **re-engineering an environmental data reporting portal**, optimizing legacy systems and **improving response time by 30%**.
- Developed new **RESTful APIs** using **Python (FastAPI)** to expand reporting functionality and **modularize system components**.

EDUCATION

Bachelor of Technology

Mar Athanasius College of Engineering, Kothamangalam

CGPA: 8.56

ACHIEVEMENTS

- **Best New Comer/Rookie Award – Rockwell Automation (2023)**
For impeccable performance and excellence at work every day