

SARAVANAN SETRASU

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SUMMARY

Software Developer in Data Science with 2+ years of experience in building scalable ML solutions, REST APIs, and cloud-based automation using Python, Django, and AWS. Proven expertise in deploying Gen AI agents, RAG-based chatbots, and real-time analytics pipelines. Passionate about solving business problems through data-driven insights, GenAI, and end-to-end MLOps.

PROFESSIONAL EXPERIENCE

VR Della IT Services Pvt Ltd., Tiruchirappalli | September 2023 - Present
Software Developer in Data Science

- Developed **REST APIs** using **Django**; integrated **Auto Gen** and **Jenkins** to automate workflows, increasing processing speed by **30%** in Background verification systems and project deployment.
- Resolved production issues by analyzing logs using **CloudWatch**, debugging queries, and optimizing database schemas, reducing downtime by **40%** and improving query performance by **25%**.
- Automated complex SQL query generation and execution using **Model Context Protocol (MCP)** framework, streamlining database operations and reducing manual query workload by **70%**.
- Deployed scalable Django applications on **AWS EC2**, implemented Lambda functions for serverless execution, and used S3 for secure file storage and retrieval, reducing manual operations and deployment efforts by **50%**.
- Built real-time, secure services with **Kafka**, **FastAPI**, and **JWT Auth**; optimized database models for high performance.
- Enhanced a **Retrieval-Augmented Generation (RAG) chatbot** tailored for the construction industry, capable of handling over 1 million+ unstructured data points, achieving **70%** faster data retrieval.
- Designed **AI agents** using **LangGraph** and other frameworks, enhancing workflows through **LLM fine-tuning** powered automation.

SKILLS

- **Programming and Database languages** - Python, R, MySQL, PostgreSQL, MongoDB.
- **Design and Development Tools** - Django, Rest Framework, Fast API, Flask, AWS, Docker, CI/CD, Git, Github Actions, Jenkins, Apache Airflow, Kafka.
- **Web Technologies** - AI Tools and Frameworks, Deep Learning, Large Languages Models, **AI Agents**, MCP, LangChain, Llamaindex, Gen AI, NLP, Vector Databases, Image Recognition Models.
- **Data Analysis and Technical Skills** - **MS Power BI**, DAX Functions, MS Excel, ETL Process Data Preprocessing, Data Modeling, Statistics, Pandas, NumPy, Matplotlib, Plotly, Jupyter Notebook, MS Fabric (Basics).

EDUCATION

Master of Science in Data Science | Bishop Heber College, Tiruchirappalli

2021 - 2023

Bachelor of Science in Mathematics | Bharathidasan University, Tiruchirappalli

2018 - 2021

PROJECTS & RESEARCH

Valiantt Info - US (Background Verification) | Python, Django, OpenAI, EC2, S3, RDS

- Developed and deployed a scalable background verification platform using Python, Django, AWS EC2, S3, and RDS, enhancing automation and data reliability for Valiantt Info - US and by leveraging OpenAI, manual verification time was reduced by **60%**.

Vriho Chatbot (AI assistant for Construction based queries) | Python, FastAPI, OpenAI, LangChain, DynamoDB, S3, EC2

- Engineered a custom chatbot employing the LangChain framework and OpenAI LLM to streamline navigation, resulting in **500+** user interactions within the first week and improved user engagement.

Environmental Sound Classification | Python, MySQL, Flask, Deep Learning

- Implemented Stacked Bidirectional LSTM and CNN algorithms for Environmental Sound Classification and I achieved a notable accuracy of **90%** in the project.

AI - Image Information Extractor | Python, Gemini AI, AWS EC2, S3

- Prepared AI Image Information Extractor using Python and Gemini AI, also used AWS EC2 with S3 for cloud, achieving **40%** faster image data extraction and improving processing accuracy by **20%**.

CERTIFICATIONS

- NPTEL - Big Data Computing
- Google - Advanced Data Analytics
- Microsoft - Fabric Bootcamp
- Coursera - Applied Social Network Analysis
- Hackerank - SQL(Basic & Intermediate)