

# Sathya Joshua

SOFTWARE ENGINEER - AI/ML & BACKEND DEVELOPER

Results-driven AI/ML Engineer with 2+ years of experience in GenAI including LLM fine-tuning, RAG pipelines, Agentic AI, Backend engineering and Full stack solutions. Delivered AI chatbots, recommendation engines and government data platforms. Skilled in microservices, stakeholder advisory, and translating business challenges into data-driven and scalable AI solutions.



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## Experience

Grasp Software Solutions, Sdn, Bhd., Malaysia - Hybrid

### 1. Software Developer – AI/ML Products & Automation Aug 2024 – Jul 2025

- Contributed to the development of a domain-specific ERP/CRM (Temple Management Software), focusing on admin dashboards, accounting modules and service booking flows. Independently designed a Reminder System and 5 complete service booking modules. Integrated payment gateways and third-party APIs eliminating 100% manual bookings.
- Designed an enterprise grade Intelligent Document Q&A System (RAG), improving retrieval accuracy and efficiency by optimizing embeddings and retrieval pipelines.
- Built a Learning Management System with automated student tracking, password recovery, and dynamic email workflows, reduced manual certificate work effort by 90%.
- Designed and launched a Devotee Management System with WhatsApp API automation, payroll system, streamlining reminder and interaction, boosted user engagement by 60%.

### 2. IT Analyst – AI Development & Client Deployment Aug 2023 – Jul 2024

- Developed AI-driven trade & financial data portal for government (MITI) with BFSI use cases such as product classification, tariff search, and real-time financial data analysis.
- On-site Deployment in Malaysia-** including kiosk installation, live demonstrations, and end-user training. Conducted a one-week user behavior analysis, identified and resolved performance/UI issues (streamlined from 6 to 3 steps), advised stakeholders on adoption strategies – driving kiosk usage growth from ~20 to 130+ bookings/day within 3 weeks.”

Vivaan Tech Solutions, Tenkasi, India

### 3. Intern – POC & LLM Developer May 2023 – Jun 2023

- Developed domain-specific AI chatbots by comparative research on OpenAI GPTs, LLaMA, BERT and Gemini, fine-tuning LLMs with structured prompt toolchains using Python Flask.
- Designed and implemented a RAG-based chatbot pipeline: collected, cleaned, and preprocessed domain datasets, then integrated with OpenAI API for contextualized Q&A.
- Deployed POCs on AWSEC2 and Azure, gaining experience in on-premise vs cloud and familiarity with multi-agent LLM frameworks, embeddings and vector search technologies.

## Technical Skills

**Programming & Frameworks:** Python, PHP, Flask, JavaScript, RESTful APIs, FastAPI. **Basic:** XGBoost, Scikit-learn, SVM, PyTorch, TensorFlow, Keras.

**AI/ML & LLMs:** LLMs(OpenAI GPT, LLaMA, vertex AI, Gemini), Pandas, NumPy, Neural networks, NLP, RAG, LangChain, LangGraph, Pinecone, Chroma, Vector Databases, Hugging face.

**Data Science & Analytics:** Data cleaning, Data Processing, Data Visualization (Matplotlib, Plotly) and Transformation,

**Databases:** SQL, PhpMyAdmin, SQLite.

**Cloud:** AWS (EC2, S3, IAM), Azure (Blob storage).

**Tools & Methodologies:** Postman, Cron Jobs, API Management, Agile/Scrum, DevOps / MLOps (Docker, Git hub, CI/CD pipelines-Basic).

## Certifications

- Intro to **Data Science** by Infosys
- Data Science Methodology by IBM

## Achievements

Our Project **Crop Disease Detection & Fertilizer Recommender** was selected for funding under Student Project Scheme by the **TN State Council for Science and Technology, India.**

## Projects

- **Intelligent Document Q&A System:** Built an Retrieval-Augmented generation (RAG) with agent orchestration (LangGraph), vector DB, Implemented CI/CD pipelines for ML model deployment using Docker & GitHub Actions with API endpoint returning with citations.
- **Crop Disease Detection & Fertilizer Recommender:** Built a CNN image classifier using TensorFlow & OpenCV with 92% accuracy, recommending fertilizers based on NPK values.
- **Face Recognition Attendance System:** Built a face recognition attendance system using OpenCV and deep learning, achieving reliable real-time detection and automated logging.
- **Heart Disease Prediction:** Implemented supervised ML models (classification & regression) with feature engineering, cross-validation, and performance tuning using scikit-learn & XGBoost for predicting hear disease with pre-historic medical data.
- **Web Phishing Detection:** Implemented a Random Forest classifier to detect malicious sites.

## Professional Skills

- Strong verbal and written Communication
- Problem-Solving skills.
- Adaptability and Accountability.
- Strong Research and Analytical skills.
- Eager to learn and adapt.
- Cross functional collaboration
- Client & Stakeholder Engagement.

## Education

### Einstein College of Engineering

Bachelor of Computer science Engineering  
2019 - 2023 | CGPA - 7.8

## Languages

- **English:** Professional working proficiency
- **Tamil:** Native / Bilingual proficiency