KS VIGNESH

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Education

JSS Academy Of Technical Education

Bachelor of Engineering in Artificial Intelligence and Machine Learning

Dec 2022 – Present Bengaluru, Karnataka

Relevant Coursework

- Data Structures
- Software Engineering
- Algorithm Analysis
- Database Management
- Artificial Intelligence
- Machine Learning
- LLM (Large Language
 - Models)

- Computer Networks
- Operating Systems
- Blockchain

Experience

V2Soft

LLM Intern

July 2025 - Present

Bengaluru, On-Site

• Gained practical experience applying Large Language Models (LLMs) by contributing to the development of a proof-of-concept application for a real-world business use case.

Projects

Decentralized Mental Health Support Network | FastAPI, Hyperledger Fabric, React, TypeScript

July 2025

- Architected a Hyperledger Fabric blockchain for anonymous user authentication and a token-based reward system.
- Implemented an AI-powered peer matching system and real-time crisis detection to facilitate user support.
- Engineered a full-stack application using React/TypeScript frontend and a high-performance FastAPI backend.
- Secured user communications with end-to-end encryption and managed anonymous identities via wallet integration on the Polygon network.

Multimodal RAG Chatbot System | Flask, Milvus, Computer Vision, Python, LLM

Mar 2025

- Engineered a multimodal RAG system that processes both text and image inputs by integrating a vision-language model for real-time analysis.
- Architected a high-performance vector search backend using Milvus, validated on 11,000+ entries, achieving 97% search accuracy with average response time of 220ms.
- Developed a modular, service-oriented architecture with robust RESTful APIs for chat, data management, and system monitoring.
- Ensured production-readiness via comprehensive error handling, performance tracking, and secure file upload validation.

LLM-Enhanced Speech-to-Text System | Flask, faster-whisper, LLM, Python

Mar 2025

- Developed a high-throughput speech processing system by integrating faster-whisper model for transcription and a custom LLM for intelligent text enhancement.
- Engineered a robust audio ingestion pipeline using ThreadPoolExecutor to concurrently process multiple formats (WAV, MP3, WebM) with validation and secure handling.
- Implemented context-aware session management and conversation history via asynchronous OpenAI-compatible API integration.
- Ensured system reliability and security by adding dynamic configuration, structured logging with performance metrics, and health monitoring endpoints.

Technical Skills

Languages: Python, Java, C, HTML/CSS, JavaScript, SQL

Developer Tools: VS Code, AWS, GitHub, TensorFlow, MongoDB, Power BI

Technologies/Frameworks: Linux, WordPress

Leadership / Extracurricular

ART-HOUSE Spring 2023 – Present

Photo Video Editor

JSSATE

• Designed promotional posters and edited marketing videos for 'VERVE,' the annual college festival, using Adobe Photoshop, Illustrator, and Premiere Pro.

 $\begin{array}{c} \textbf{AIKYAM} \\ \textit{Member} \end{array} \hspace{3cm} \textbf{Spring 2025 - Present} \\ \textit{JSSATE} \end{array}$

- Aikyam is the AIML branch fest of the college.
- Co-organized one of the biggest hackathons in the college with over 90 teams and 400+ participants.