

VASU G

Kumbakonam, Tamil Nadu

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👤 [portfolio](#)

EDUCATION

Karpagam College of Engineering

B.Tech Information Technology - **CGPA - 8.3**

Sep 2023 – Aug 2027

Coimbatore, Tamil Nadu

Good Luck Matric Hr Sec School

Higher Education - **Percentage - 94%**

Jun 2022 – Jun 2023

Srikandapuram, Tamil Nadu

COURSEWORK / SKILLS

- Web Development
- Database Management System
- Debugging
- Object-Oriented Programming
- Problem Solving
- Data Structures & Algorithms

PROJECTS

Social Media Sentiment Analysis | Python, NLP, Machine Learning

Ongoing

- Conducting comparative research on sentiment classification algorithms to analyze user opinions and trends on social media platforms.
- Performing a comprehensive literature review to evaluate existing **NLP** methodologies, identifying gaps in sarcasm detection and multilingual text analysis.
- Developing a data preprocessing pipeline using Python libraries to tokenize and clean large-scale datasets for future model training.
- Implementing feature extraction techniques such as **TF-IDF** and Word Embeddings to transform raw text into meaningful vector representations.

Agentic AI System for Crop Nutrient Diagnosis | Python, React.js, FastAPI, LLM, CNN

Dec 2025

- Designed and developed a full-stack **Agentic AI** System to diagnose crop nutrient deficiencies, integrating an **LLM** for interactive clarification and a **CNN** for image-based detection.
- Built the diagnostic core using a fine-tuned **ResNet** model, achieving **92% accuracy** in classifying nutrient deficiencies from plant images.
- Implemented a multi-step **RAG** pipeline to extract precise fertilizer recommendations from a curated knowledge base after the LLM agent clarifies the user's input.
- Engineered the system using React.js for the responsive front-end and **FastAPI** for the high-performance backend, ensuring low-latency data processing.

Food Delivery 🍴 | MERN Stack, Spring Boot

Apr 2025

- Engineered a full-stack food ordering platform using the **MERN** stack with Spring Boot microservices for backend processing.
- Implemented dynamic menu rendering, and a persistent shopping cart, enhancing user engagement by **30%**.
- Designed a responsive, mobile-first UI with React.js, resulting in a **40% improvement** in user experience scores based on feedback.
- Integrated secure user authentication using **JWT** and encrypted passwords, ensuring data privacy and secure access control.

TECHNICAL SKILLS

Languages: Java, C, C++, Python, JavaScript, HTML, CSS

Developer Tools: VS Code, Git, GitHub, IntelliJ IDEA

Technologies/Frameworks: Spring Boot, React.js, Node.js, Express.js, MongoDB, Oracle, Microservices

CERTIFICATIONS

- Coursera - React.js Advanced
- HackerRank - JavaScript
- HackerRank - HTML & CSS
- HackerRank - SQL
- HackerRank - Node.js
- Geeks for Geeks - Java