V BALA SANKAR

+91 8072250171 ⋄ Madurai, India

balasankar2108@gmail.com ⋄ linkedin.com/in/vbalasankar ⋄ vbalasankar.github.io

EDUCATION

Integrated M.Tech in Computer Science and Engineering, VIT Vellore — 2023- 2028

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Database Management Systems, Blockchain Technologies, Soft Computing, Artificial Intelligence and Expert Systems, Deep Learning.

Science Stream (Class XII), Kendriya Vidyalaya — 2011 - 2023

SKILLS

Programming Languages	Python, Java, C, C++, Rust, SQL, Bash, HTML, CSS, JS
Developer Tools	Git, GitHub, VS Code, Figma, Wireshark, Nmap
Technologies	Linux, Firebase, AWS

PROJECTS

AI-Powered Smart Farming Advisory System: Built a voice-enabled agricultural assistant that provides personalized crop recommendations, disease detection, weather-based advisories, and market insights for farmers. Achieved 90% + disease detection accuracy and improved decision-making through real-time insights and voice interaction. Tech Stack: React, Node.js, Express.js, MongoDB, Gemini API, Google Cloud Vision API, AssemblyAI, OpenWeatherMap API, News API, Scrape.do, Market Price Dataset.

AI-Powered University Helpdesk Chatbot: Architected a Retrieval-Augmented Generation (RAG) system to automate university support and reduce manual query handling. Engineered the document retrieval pipeline and integrated LLM APIs to deliver real-time academic assistance with low latency.

Court Case Management System: Engineered a digital platform to digitize and manage legal records, supporting concurrent case files. Integrated a custom machine learning classification pipeline that automatically categorizes case types, accelerating administrative sorting time.

PharmaCheck: Clinical Decision Support System: Built a clinical validation web application that cross-references user prescriptions against live medical databases to detect potential drug interactions. Designed a real-time alerting system that classifies interaction severity, successfully flagging critical medication risks.

GreenGuardian: Smart Urban Planting Advisor: Deployed a cross-platform mobile application that analyzes live temperature, air quality, and soil moisture data to recommend hyper-local urban planting strategies. Integrated an image-based classification model for plant identification and mapped environmental data using Leaflet and Mapbox. Tech Stack: React Native, Node.js, Firebase Cloud Functions, MongoDB Atlas, Mapbox, Google Gemini API.

LEADERSHIP

- **Founder and Secretary, The WhiteHat's Club** (VIT Vellore): Founded the university's first cybersecurity club, scaling the community to over 200+ active members. Organized technical workshops and Capture The Flag (CTF) events to train students in ethical hacking, network analysis, and security research.

EXTRA-CURRICULAR ACTIVITIES

- **Core Member, Anchoring Club** (VIT Vellore): Hosted and managed logistics for university-scale events.
- **Member, E-cell** (VIT Vellore).
- **Member, Leo Club** (VIT Vellore).