GS Sumithra Gopal

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EDUCATION

B.Tech in Computer Science Engineering (AI & ML), VIT Chennai   2022 - 2026
CGPA: 9.37

Esaki Vidyaashram (CBSE), Tenkasi
Grade X (2020) : 92.4% , Grade XII (2022) : 86.4%

SKILLS

Programming Languages: Java, C, C++, Python, SQL
Web Development: HTML, CSS, JavaScript, React, Node.js, Express.js, MongoDB
Generative AI: LangChain, OpenAI API, Hugging Face, Groq
Tools & Technologies: Git, VS Code, AWS, Streamlit

EXPERIENCE

Samsung R&D Institute | PRISM Intern   June 2024 - May 2025
- Collaborated with Samsung R&D Institute and academic mentors to prototype a **blockchain-powered on-device AI ecosystem**, focusing on secure and decentralized model deployment.
- Integrated model integrity verification using **SHA-256 hashing** and **Ethereum smart contracts** (Sepolia/Ganache), ensuring tamper-proof AI deployment.
- Developed a role-based Android application with real-time validation features, where the verification logic **detected 100% of model tampering attempts** in simulation testing.

Gestetner Ricotec | Frontend Developer   May 2025 - June 2025
- Contributed to the design and development of the landing page for ApexTek, ensuring a responsive and user-friendly interface.

PROJECTS

HostelAssist: Full-Stack Hostel Complaint Management System   *React, Node.js, Express.js, MongoDB*
- Developed a full-stack hostel complaint management system using the **MERN stack**, implementing secure **user/admin authentication**, **JWT-based authorization**, and **role-based access control** for end-to-end complaint resolution workflows.
- Designed APIs with **Express.js** and **MongoDB**, enabling **file uploads** via **Multer**, **OTP email verification** using **Nodemailer**, and **RESTful endpoints** for complaint submission, tracking, and filtering by block/category.
- Built a responsive **React.js frontend** with protected routes and modular components for user login, complaint submission, and admin dashboards, ensuring seamless communication with backend APIs.

Multi-PDF Chat: LLM-Powered Document Q&A System   *LangChain, Groq LLaMA 3*
- Built an LLM-integrated PDF chatbot using **Groq's LLaMA 3**, **FAISS**, and **Retrieval-Augmented Generation (RAG)**, enabling real-time Q&A across multiple documents.
- Processed and embedded **5,000+ chunks** from unstructured PDFs (100+ pages), achieving **3–5s average latency per query** through optimized FAISS retrieval and LLM inference.

ContractGenie: AI-Powered Legal Assistant   *Groq, Streamlit, PDFplumber*
- Developed an intelligent legal assistant **Groq's LLM** and **Streamlit** to automate **90%** of NDA drafting, summarize uploaded contracts and simplify legal clause in plain language for non-experts.
- Designed a complete pipeline involving PDF parsing, custom prompt templates, API integration, and secure key management using Streamlit Secrets.

DermaScan: Skin Lesion Classification & Explainability   *HAM10000, VGG16, Grad-CAM*
- Implemented a deep learning pipeline to classify skin lesions into 7 diagnostic categories using the **HAM10000** dataset and a fine-tuned **VGG16** architecture achieving an accuracy of **89%**.
- Incorporated **Grad-CAM** visualizations to highlight lesion areas influencing model decisions, enhancing interpretability for medical professionals.

POSITIONS OF RESPONSIBILITY

Community Lead, Fraternity of Young Innovators, VIT Chennai   April 2024 - March 2025
Led community growth at Fraternity of Young Innovators and curated social media campaigns reaching 4,000+ members.

Operations Head, Voyage 2024, VIT Chennai   August 2024
Organized a 3-day Entrepreneurship Summit in VIT Chennai with 1,000+ participants, coordinating logistics and event execution.