

Yaganti Lohithnath Reddy

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EDUCATION

B.Tech – Computer Science and Engineering

Vellore Institute of Technology, Vellore

2023 – 2027

CGPA: 9.37 / 10.0

Intermediate (Class XI & XII) – TSBIE

Sri Chaitanya Junior Kalasala, Hyderabad

2021 – 2023

Percentage: 97.6%

Secondary School Certificate (Class X) – TS SSC

Sri Chaitanya School, Hyderabad

2020 – 2021

CGPA: 10.0 / 10.0

SKILLS

Languages: Python, Java, C++, Golang, C, JavaScript, SQL

Frameworks & APIs: FastAPI, React, Next.js, Node.js, GoFiber, Flutter, RESTful APIs, WebSockets

AI & Machine Learning: PyTorch, TensorFlow, OpenCV, Generative AI (LLMs, RAG), ChromaDB, NLP

Cloud, DB & DevOps: AWS (EC2, RDS, Lambda, Auto Scaling), Docker, PostgreSQL, CockroachDB, Git, Github

Core CS: DSA, OOPs, DBMS, Operating Systems, Computer Networks

WORK EXPERIENCE

Research Intern – AI & Computer Vision

Indian Institute of Technology (IIT), Delhi

Apr 2025 – Dec 2025

New Delhi, India

- Analyzed **20+ video restoration architectures** across CNN, LSTM, and Transformer paradigms on CCTV footage.
- Modeled robust video deraining pipelines utilizing **5,000+ real-world surveillance feeds**.
- Accelerated model training workflows on multi-GPU **NVIDIA DGX clusters** to process multi-gigabyte datasets.
- Co-developed and patented **RainMark**, a deterministic CV framework to detect rain streaks and triage ML workloads.

Frontend Developer Intern

Scientiflow (Biotech)

May 2025 – Jul 2025

Vellore, India

- Programmed 10+ responsive Next.js frontend modules for a core biotech workflow management system.
- Given added ownership of FastAPI backend integration and rewired REST APIs across 5+ backend services.
- Delivered a 30% improvement in frontend responsiveness through this integration and rewrite.

KEY PROJECTS

NoteBound – AI Collaborative Learning Platform

Tech Stack: Golang, Python, React, FastAPI, CockroachDB, ChromaDB, Docker

Aug 2025 – Oct 2025

- Spearheaded a 3-tier distributed GoFiber and WebSocket backend to handle concurrent real-time sync.
- Integrated CockroachDB as the distributed SQL layer for its Raft-based replication and fault tolerance over a single-node DB.
- Engineered a FastAPI microservice driving RAG-based document intelligence, using a lightweight, locally-hosted embedding model to query 200+ document embeddings via ChromaDB.

NFC Smart Shuttle Payment System

Tech Stack: Flutter, FastAPI, AWS (EC2, Auto Scaling, RDS), Docker

Jan 2026 – Apr 2026

- Built a cloud-native NFC transit payment system using RFID cards and zero-trust JWT authentication.
- Orchestrated a FastAPI and PostgreSQL backend on AWS, maintaining consistently low-latency API response times in functional testing.
- Delivered a cross-platform Flutter application featuring real-time trip tracking and automated push notifications via Firebase.

DocScribe – AI Prescription Generation Assistant

Tech Stack: Python, FastAPI, Ollama, Qwen, Flutter, On-Device STT

Jan 2026 – Mar 2026

- Devised a fully offline clinical NLP pipeline, keeping sensitive patient data on-device and out of any third-party API.
- Integrated a lightweight, local on-device Speech-to-Text module to transcribe physician dictations entirely offline.
- Extracted clinical entities via local Qwen LLMs, mapping structured output directly into standardized PDF prescription templates.

ACHIEVEMENTS & CERTIFICATIONS

- Patent Published:** RainMark: Unified Framework for Detection and Quantification of Rain Streaks – IIT Delhi.
- Hackathons:** Winner at **Yantra Central Hack 2025** (Best Civil Track); Qualified for **Smart India Hackathon 2025**.
- Certifications:** **IBM Generative AI Certification** (Foundation Models, Prompt Engineering, Applied GenAI).