Mohnish Kodukulla

Full-Stack Developer — Intern @ SpectoV — Gen AI — DevOps

PERSONAL DETAILS

Location	Chennai, Tamil Nadu, India
Email	kmohnishm@gmail.com
LinkedIn	https://www.linkedin.com/in/mohnish-kodukulla-83b82a287/
GitHub	https://github.com/KMohnishM
Portfolio	https://kmohnishm.github.io

SUMMARY

I am Mohnish Mythreya, a 3rd-year CSE student at VIT Chennai, with a deep interest in Full-Stack Development, Cloud Infrastructure, and AI-driven systems.

I have built and deployed end-to-end applications using the MERN stack, Next.js, Redis, and Docker, and have experience managing real-time systems and monitoring pipelines using Prometheus and Grafana. My projects integrate scalable backend architectures with intelligent components, including Generative AI and LLM-based workflows.

I am particularly drawn to solving problems at the intersection of systems engineering and AI, including real-time collaboration, anomaly detection, and adaptive learning platforms. I thrive in fast-paced, exploratory environments and am always eager to push boundaries with automation, optimization, and meaningful tech applications.

WORK EXPERIENCE

Web Developer   Nov 2024 – Present
SpectoV

At SpectoV, an AR/VR startup, I focus on frontend development and support my leads in building high-performance websites. Over the months, I've gained hands-on experience in SEO, UI/UX, and web optimization.

Python Development Intern   June 2024 – July 2024
CodSoft (Remote)

- Completed hands-on tasks including Python GUI applications using Tkinter
- Gained practical experience in event-driven programming and desktop UI design

EDUCATION

B.Tech in Computer Science and Engineering   2023 – Present
Vellore Institute of Technology, Chennai

CGPA: 9.31/10

Completed Coursework: Python Programming, Data Structures and Algorithms (DSA), Operating Systems (OS), Computer Networks (CN), Probability & Statistics, Design and Analysis of Algorithms (DAA)

Currently Exploring: Database Management Systems (DBMS), Artificial Intelligence (AI)

Senior Secondary (Class 12)   2022 – 2023
Sri Chaitanya Junior College, Visakhapatnam

Percentage: 91.2%   —   JEE Advanced Rank: 13k

Secondary School (Class 10)   2020 – 2021
Sri Chaitanya School, Kakinada
> Marks: 591/600   —   Percentage: 98.5%

PROJECTS

HintGen – Contextual LLM Hint Generator   View Project
> Built a system that gives smart, helpful hints to students stuck while solving coding problems. Instead of showing the answer, it understands what the student is trying to do by analyzing their code, the problem, and past attempts. Then, it uses AI (LLMs) to generate hints that guide them step-by-step in the right direction. The system also checks each hint to make sure it's safe, useful, and actually helps the student learn and make progress.

SALS – Smart Adaptive Learning System   View Project
> Built a personalized learning platform that adapts in real-time to students' strengths and weaknesses using diagnostic quizzes, performance analytics, and tailored content flows. Leveraged Django, React, LangChain, and OpenRouter to integrate LLMs for generating adaptive questions, resources, and evaluation pipelines. Aimed to enhance engagement, mastery learning, and intelligent tutoring through scalable, modular architecture.

SoilClassification – AI-based Soil Image Classifier   View Project
> TDeveloped a soil type classifier using a pre-trained Vision Transformer (ViT) for the Annam AI Hackathon 2025. The pipeline included data preprocessing, class imbalance handling, and image feature extraction using Hugging Face's ViTModel. Trained a lightweight Keras classifier on ViT embeddings and evaluated with precision, recall, and F1-score. Emphasized modularity, EDA, and interpretability through Grad-CAM and class distribution analysis.

CN Project – Cloud-Based Network Monitoring   View Project
> Engineered a real-time network monitoring and anomaly detection system tailored for cloud-hosted hospital infrastructures. Simulated vital signals (SpO2, heart rate, ECG) and streamed metrics via Flask, exposing them to Prometheus for scraping. Deployed using Docker on AWS EC2,with Grafana dashboards and Alertmanager rules for critical health conditions like hypoxia.

OS Data Analysis Tool – Dynamic CPU Scheduler & Monitor   View Project
> Developed a real-time CPU scheduling and monitoring tool in C using ncurses, combining a tree-based priority scheduler with Round Robin logic. The system dynamically adjusts time quantum , maintaining utilization below 80%. It features an interactive terminal UI that visualizes CPU usage, memory stats, and process states, providing hands-on insight into adaptive scheduling under varying workloads.

TECHNICAL SKILLS

Programming Languages	Python, JavaScript, C++, Java, HTML/CSS
Frameworks & Libraries	React.js, Next.js, Tailwind CSS, Flask, Django
AI/ML Technologies	LLMs, Prompt Engineering
DevOps & Cloud Tools	Docker, Redis, Git, GitLab CI/CD, AWS EC2
Monitoring & Real-Time Systems	Prometheus, Grafana, WebSockets