

MADAPATI ABHINAV SAI

B.Tech CSE (AI & ML) | VIT-AP University | CGPA: 7.5 / 10

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PROFESSIONAL SUMMARY

Computer Science undergraduate (AI & ML specialization) at VIT-AP University with hands-on experience building production-deployed full-stack applications, deep learning pipelines, and NLP/LLM-powered systems. Proficient in Python, TypeScript, React, PostgreSQL, and YOLO. Delivered 7+ end-to-end projects within Agile frameworks — from real-time computer vision safety systems and multi-domain sentiment analysis engines to SaaS platforms. Available for an immediate AI/ML or software engineering internship; experienced in rapid software prototyping, CI/CD deployment pipelines, and modern product development.

CORE COMPETENCIES

- Machine Learning & Deep Learning
- Computer Vision & Object Detection
- AI Automation & System Architecture
- REST API Design & JWT Authentication
- Model Training, Evaluation & Debugging
- Natural Language Processing (NLP/LLM)
- Full-Stack Web Development
- Data Analysis & Visualization
- CI/CD & Deployment Pipelines
- System Design & Problem Solving

EDUCATION

B.Tech — CSE (AI & ML)	VIT-AP University, Amaravati	2024 – 2028	CGPA: 7.5
Intermediate — MPC	Narayana Junior College	2022 – 2024	Percentage: 93%
SSC	Sri Chaitanya Techno School	2022	Percentage: 93%

TECHNICAL SKILLS

Languages	Python, Java, C, JavaScript, TypeScript
Frontend	React JS, HTML5, CSS3, Tailwind CSS, Vite, Responsive Design
Backend / DB	Node.js, Express, FastAPI, PostgreSQL, MySQL, MongoDB, Firebase, REST APIs
AI / ML	TensorFlow, PyTorch, Keras, Scikit-learn, YOLO, OpenCV, BERT, LSTM, NLP
Dev Tools	Git, GitHub, Docker, Vercel, Cloudflare Workers, Jupyter Notebook, CI/CD, VS Code
Concepts	OOP, Data Structures & Algorithms, Agile, System Design, AI Automation

PROJECTS

AI-Based Coal Classification System

[View on GitHub](#)

Python | YOLO | OpenCV | PyTorch | Computer Vision

- Developed a deep learning-based coal classification system using YOLO architectures to classify underground coal destruction types from geological image datasets.
- Trained and benchmarked YOLOv8, YOLOv10, and YOLOv11 models on a 1.55 GB dataset containing five standardized coal destruction categories.
- Implemented image preprocessing, augmentation, and evaluation pipelines to improve classification accuracy and model generalization across geological coal structures.

CricketConnect Pro

[View on GitHub](#)

TypeScript | React | Node.js | PostgreSQL | Vercel

- Engineered a production-deployed cricket management platform supporting real-time bookings, tournament scheduling, and multi-user workflows.
- Integrated JWT Authentication and deployed to production on Vercel with a Cloudflare Workers backend, optimizing API latency.
- Debugged and resolved cross-environment build failures and mobile UI responsiveness issues across 43 CI/CD deployments.

LaundryHub — AI-Powered SaaS Platform

[View on GitHub ↗](#)

TypeScript | React | Firebase | Node.js

- Developed a multi-role SaaS platform (Admin/Operator/Student) with real-time order tracking, push notifications, and Firebase data sync.
- Integrated an AI-powered support assistant that automated routine customer interactions and reduced manual query handling.

Civic AI — Government Issue Reporting Platform

[View on GitHub ↗](#)

Python | FastAPI | React | NLP | REST APIs

- Built an AI-driven civic complaint system with NLP classification that auto-routes issues to the correct government department.
- Implemented a FastAPI backend with priority-scoring logic and a responsive React dashboard for government officials.

EduVision-X

[View on GitHub ↗](#)

Python | React | Computer Vision | AI/ML

- Architected an AI-powered educational platform integrating computer vision models to enhance interactive learning experiences.
- Optimized backend data processing and model inference latency, delivering real-time feedback for users.

TractuMitra

[View on GitHub ↗](#)

Node.js | React | REST APIs | MongoDB

- Engineered a comprehensive tracking and management solution with a robust Node.js backend and a responsive React frontend.
- Implemented secure RESTful APIs and optimized database queries to ensure scalable and efficient data retrieval.

Multi-Domain Sentiment Analysis System

[View on GitHub ↗](#)

Python | BERT | LSTM | NLP | Scikit-learn

- Designed NLP classifiers across 7 real-world datasets using 15+ Machine Learning and Deep Learning models.
- Fine-tuned BERT and trained LSTM pipelines; achieved up to 86% test accuracy on the IMDB benchmark, outperforming baseline models.
- Produced production-ready reporting per domain—evaluating accuracy, F1-score, confusion matrix, and ROC-AUC.

CERTIFICATIONS

- **Oracle Cloud Infrastructure 2025 AI Foundations Associate** — Oracle
- **Foundations of Project Management** — Google / Coursera
- **Data Analytics Virtual Job Simulation** — Deloitte Australia
- **Fundamentals of Java Programming**
- **MATLAB Onramp** — MathWorks
- **C Programming for Absolute Beginners**

ACHIEVEMENTS & ACTIVITIES

- **1st Place** — **Git & GitHub Open Source Challenge**, contributing to open-source projects through collaboration
- **2nd Place** — **ElectroQuest Technical Competition**, IET Student Chapter, VIT-AP University.
- **Participant** — **VIT-AP Aura Hackathon**, team-based competitive problem-solving under time constraints.
- **Technical Team** — **@Qaulium-AI**, contributing to AI product development and innovation.
- **Member** — **GDGoC VIT-AP AI/ML Team**, contributing to AI/ML initiatives and development.