

Abhinav Mamidi

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Professional Summary

AI and Data Science enthusiast with hands-on experience in Generative AI, debugging, data visualization, machine learning, and computer vision. Skilled in developing intelligent systems, prompt engineering, automation tools, and analytics dashboards. Passionate about scalable AI solutions, research-oriented development, and deployment.

Skills

Programming: Python, R, C, Java, SQL

AI & ML: Machine Learning, Computer Vision, Generative AI, Prompt Engineering

Frameworks: OpenCV, YOLO, PyTorch, TensorFlow, React, Django

Tools: Power BI, GitHub, Jupyter, Postman API

Specialized: Structured Prompt Design, Data Visualization

Experience

Infosys Springboard – Internship (Nov 2024–Jan 2025) *AI Intern*

- Implemented a real-time PPE compliance detection system using YOLO and OpenCV for industrial safety monitoring.
- Detected helmets, gloves, and protective gear from live video streams with automated non-compliance alerts.
- Improved detection efficiency and reliability through model tuning, enabling scalable deployment in manufacturing environments.

Data Science & Generative AI (Jan 2025–Mar 2025) *Intern at Innomatics Research Labs*

- Developed an AI-powered code review tool to analyze source code and identify logical errors, inefficiencies, and improvement opportunities.
- Enhanced code readability and maintainability by automating review feedback using Generative AI models.

Projects

PPE Kit Detection for Automobile Manufacturing

- Developed a real-time PPE compliance monitoring system using YOLO and OpenCV.
- Integrated live video detection for helmets, gloves, and safety gear with alert triggers.
- Optimized detection speed and accuracy, enabling scalable safety automation for factories.

AI Code Reviewer

- Designed an AI-based tool that reviews code, identifies logic issues, and recommends improvements.
- Implemented structured prompting and analysis flow for debugging assistance using GenAI models.

Sorting Visualization Tool

- Built an interactive system to visualize Merge, Quick, Heap, and Bubble sort step-by-step.
- Added animation for comparisons/swaps and execution speed control for algorithm learning.

Certifications

- Data Base Management System - NPTEL
- Cloud Computing - NPTEL
- Full Stack Web Development – Rinex Technologies

Achievements

- Student Ambassador at LetsUpgrade, supporting technical events and peer learning initiatives.
- Participated in technical quizzes and hackathons focused on AI, logic, and problem-solving.