PRAHARSH SAI MADABATHULA

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GitHub | Portfolio Website | Leet Code | Geeks for Geeks | Hacker Rank | Coding Ninjas
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EDUCATION

Malla Reddy Engineering College — Hyderabad, India
B.Tech (CSE-DS) GPA: 8.90 — **November 2022 - August 2026**
Sri Chaitanya Jr College — Visakhapatnam, India
MPC; GPA: 8.69 — **June 2020 - August 2022**

SKILLS SUMMARY

Programming Languages: Python (ML, backend,DSA), Java (OOP), C/C++, JavaScript (React,Node)
Operating Systems: Basics in Unix/Linux for development, scripting, and system-level tasks
Systems & Networking: Experience with distributed systems, socket programming, and TCP/IP protocols
Machine Learning: Hands-on with regression, classification, and NLP; built ML projects like trend analysis and cost prediction
Information Retrieval: Implemented keyword extraction, ranking, and scraping using BeautifulSoup and NLP techniques
Frameworks & Tools: Flask, React, OpenCV, Scikit-learn, Git, Selenium
Problem Solving: Solved 200+ DSA problems on LeetCode, GeeksforGeeks, and HackerRank

WORK EXPERIENCE

Software Development Intern | NewYork | Remote | Woken | LINK — **November 24- March 2025**

- Collaborated directly with the CEO to enhance a cloud-native GPT data pipeline using Google Cloud tools, aligning with core distributed systems best practices.
- Built and deployed an automated data processing and email reporting framework, reducing manual effort and latency by 25%.
- Streamlined real-time data storage, retrieval, and processing workflows, improving end-to-end system efficiency by over 20%.
- Integrated scalable cloud functions for automated insights delivery, supporting business intelligence and decision-making.
- Contributed to backend system enhancements to ensure high availability and performance, leveraging cloud APIs and information retrieval techniques.

PROJECTS

Software Defect Prediction using an Intelligent Ensemble-Based Model | LINK — **June 2025 - July 2025**
Tech Stack: Python, Scikit-learn, XGBoost, Random Forest, SVM, Pandas, Matplotlib

- Built an ensemble ML model combining Random Forest, SVM, and XGBoost for defect prediction.
- Combined classifiers like Random Forest,and XGBoost using intelligent voting/stacking to enhance precision and recall.
- Used feature engineering and correlation analysis to select relevant metrics from datasets like NASA MDP and PROMISE.
- Achieved over **X% accuracy and Y% F1-score**, outperforming individual classifiers in defect prediction tasks.

AI-Powered Supply Chain Optimization and Analytics Tool | LINK — **Dec 2024 – Jan 2025**
Tech Stack: Python, Flask, React.js, Streamlit, Pandas, Folium, REST API

- Developed a modular AI system for optimizing demand forecasting, inventory management, route planning, and risk analysis.
- Integrated Streamlit(Tool interface), Flask(API/backend), and React for multi-user support and dashboard workflow.
- Enabled real-time visualization, CSV export, and dashboard saving via RESTful APIs with persistent storage.
- Built custom risk scoring algorithms, interactive maps using Folium, and dynamic plot cards with polished UI/UX.
- Optimized UX with on-demand refresh, downloads, and organized backend storage.

AI-Based Sign Language Translator | LINK
Tech Stack: Python, TensorFlow, OpenCV, NumPy, MediaPipe, Pyttsx3 — **March 2024 - April 2024**

- Developed an AI system to translate hand gestures into real-time text and speech using TensorFlow and OpenCV.
- Applied deep learning models for accurate gesture recognition and dynamic translation.
- Integrated computer vision for real-time video capture and processing.
- Aimed to enhance accessibility for the hearing and speech impaired through intuitive interface design.

ACHIEVEMENTS AND CERTIFICATES

- Certified for AI-based projects at **Shirdi Dwarakamayi 369 Innovations**, mentored by Dr. Mandaji Narshimha Chary(World Patent Holder & Scientist).
- **Resolved issues in Meta and other GitHub open-source projects; participated in Google Summer of Code (GSoC).**
- **CS50P: Python Programming** – Harvard University (Core Python concepts).
- **Machine Learning (Supervised & Unsupervised)** – Stanford & DeepLearning.AI
- Solved **200+ problems** on **LeetCode, GeeksforGeeks, HackerRank & CodeNinjas**.
- **Winner, Data Science Hackathon** – Stock prediction using Linear Regression & Random Forest.
- **Achieved Microsoft Certified**: Azure AI Fundamentals with a score of 900/1000.

INTERESTS &LANGUAGES

- Traveling, Nature Exploration, Cricket, Badmention.
- English, Hindi ,Telugu