M. PAVAN KUMAR REDDY

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 github.com/madhirepavan3000 </> leetcode.com/u/Madhire$_{pavan_kumar_reddy}$/

Education

Degree	Specialization	Institute	Year	CGPA/Percentage
B.Tech	Computer Science & Engineering	VIT-AP UNIVERSITY	2021–2025	8.64/10.0

Experience

OUTLIER | *AI Evaluation Specialist (Freelance Contributor)* 🔗   **Dec 2024 – Apr 2025**

- Evaluated and engineered prompts for generative AI models across Math, Physics, and English, identifying failure cases and improving model accuracy through detailed analysis and debugging. Developed multi-option scenarios, code debugging in Java/Python/MERN, and image-based reasoning tasks, contributing to enhanced AI robustness and earning over $1000.

COGNIZANT | *SAP HANA(High-Performance Analytic Appliance)* 🔗   **Jul 2025**

- Mastered Oracle SQL PL/SQL, creating 10+ advanced database triggers and constraints that improved data integrity, ensuring 99.99% accuracy in critical financial reporting systems.
- Constructed and deployed SAP HANA 2.0 XSA models using HDI containers, calculation views, flow graphs, table functions, and applied security, version control, and migration best practices.
- Streamlined data provisioning integration with SLT, SDA, SDI, and SAP Datasphere, enabling real-time analytics and seamless data flow across enterprise systems.

Project

Online Library Management System Website | *MERN Stack* 🔗

- Created a robust Online Library Management System utilizing the MERN Stack (MongoDB, Express.js, React, Node.js), streamlining library operations and improving user experience through an intuitive interface.
- Executed advanced user authentication mechanisms with JWT, ensuring secure access and data integrity while enhancing system performance to support increased user transactions.
- Built critical features such as a interactive book search and filter system, along with an admin dashboard for real-time management of library resources, significantly optimizing workflow efficiency for users and administrators.

Road Crack Detection System | *Deep Learning, Computer Vision, Python, TensorFlow, OpenCV* 🔗

- Created an automated road crack detection system using CNNs and Vision Transformers (ViTs) on a 40,000+ high-resolution image dataset, implementing advanced preprocessing and augmentation to enhance model generalization, achieving 98.5% accuracy with CNN and up to 99.7% accuracy and F1-score with ViT.
- Designed, compared, and deployed multiple architectures with a Streamlit-based web application for real-time crack/no-crack predictions, enabling instant user interaction and practical application in critical infrastructure monitoring.

Coffee Leaf Disease Detection System | *Deep Learning, Python, TensorFlow, OpenCV* 🔗

- Developed a robust deep learning system using ResNet-50 and TensorFlow, achieving 94% classification accuracy on a dataset of 53,000 coffee leaf images across multiple disease categories.
- Balanced the coffee leaf disease dataset using SMOTETomek and Initiated rigorous evaluation protocols, achieving an F1 score of 0.91 and improving model reliability by 20% through resolving key prediction errors.

Technical Skills

Programming: Java,python(familiar)
Databases: SAP HANA (XSA, HDI, Calculation Views, Flow Graphs), Oracle SQL, PL/SQL, MongoDB, MySQL
Tools: Github, VS Code, Linux (Ubuntu),Google Colab,Jupyter Notebook,GitHub ,Streamlit
Development: HTML, CSS, JavaScript, Flask, Django,React.js, Node.js, Express.js
Computer Science Fundamentals: DBMS, Object-Oriented Programming,Data Structures and Algorithms

Certification

AWS Cloud Practitioner <u>Link</u>   **Issued On: Jan 2024**
Intrain Tech AIML (Stock Price Prediction)<u>Link</u>   **Issued On: Apr 2024**

Achievements

- Secured **All India Rank 231** out of 5,700+ participants in **<u>CodeClash 2025</u>** – a national-level coding competition organized by Let's Code Community and hosted on Unstop.