K. Madhusudhana Rao

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Skills

- **Languages**: C++, Java, Python
- **Data Analysis**: SQL, Pandas, Numpy
- **Machine learning**: Scikit-learn, Tensor Flow
- **Soft Skills**: Problem-Solving Skills, Team Player, Project Management

Training

Data Structures and algorithms using CPP from Board Infinity May'24 - August'24

- Completed a structured training program in Data Structures and Algorithms (DSA) using C++.
- Attained Proficiency in Arrays, Linked Lists, Stacks, with hands-on implementation experience.
- Designed and optimized solutions using Sorting, Searching, Recursion, Dynamic Programming, Greedy Algorithms.
- **C**onducted Big-O analysis to enhance algorithm efficiency and scalability.
- Tech Stack : Proficient in **C++,** STL (Standard Template Library), and Data Handling techniques**.**

Projects

Library Management System: November'24 - December'24

- Designed and implemented a console-based Library Management System using C++, integrating efficient data structures.
- Applied arrays, linked lists, and dynamic programming to optimize system performance.
- Engineered a CRUD-based system to Create, Read, Update, and Delete library records, ensuring efficient data management.
- Tech Stack: C++, Basic Data Structures & Algorithms (DSA), File Handling

House price prediction: September'24 – November'24

- Developed a machine learning model to estimate house liabilities based on individual income and deductions.
- Implemented Linear Regression and Random Forest to analyze financial data and predict house prices with high accuracy.
- Performed data cleaning, normalization, and feature selection to enhance model.
- Tech Stack: Python, Pandas, Matplotlib, Scikit-learn.

Smart Kitchen Management: March'24 - April'24

- Developed an AI-powered kitchen management system using computer vision to detect and track food items in real time.
- Trained a custom object detection model using YOLOv5/TensorFlow/Keras on a self-curated dataset of kitchen items.
- Integrated a recipe recommendation engine that suggests meals based on available inventory, improving food usage.
- Leveraged Open CV for image preprocessing, bounding box extraction, and real-time video stream analysis.
- Tech Stack: Python, Pandas, Matplotlib, Scikit-learn.

Certificates

- Tata Data Visualization : Empowering business with effective insights job simulation. March'25
- Cloud computing by NPTEL . January'25
- Dynamic Programming, Greedy Algorithms by Coursera. April'24
- Chat GPT Playground for Beginners: Intro to NLP AI by Coursera. April'24
- Data Structures and algorithms using Cpp from Board Infinity . April'24

Achievements

- **Leet code problem solving**: Febrauary'25

Solved **100+** problems on LeetCode, focusing on Data Structures, Algorithms, and Optimization Techniques.

- **Certified - Cipher Schools:** July'24

Completed "Python, Data Science & Machine Learning Integrated," gaining expertise in programming and analytical techniques.

Education

Lovely Professional University Punjab, India
Bachelor of Technology - Computer Science and Engineering; ***CGPA: 6.57*** *August'22 - present*

Ravi Junior College Andhra Pradesh, India
Intermediate; ***Percentage: 86 %*** *April'20 - March'22*

St Annen's English Medium High School Andhra Pradesh, India
Matriculation; ***Percentage: 98%*** *April'19 - March'20*