

# K. Madhusudhana Rao

LinkedIn:- [www.linkedin.com/in/K-MADHU-SUDHANA-RAO](https://www.linkedin.com/in/K-MADHU-SUDHANA-RAO)  
Github:- <https://github.com/madhusudhanarao1318>

Email:- [madhusudhana009@gmail.com](mailto:madhusudhana009@gmail.com)  
Mobile: +91-6300084248

## SKILLS

- **Data Analysis:** SQL, Pandas, Numpy, Django, Flask ,Power Bi
- **Machine learning:** Scikit-learn, Tensor Flow
- **Interface:** Dbms, Api's
- **Soft Skills:** Problem-Solving Skills, Team Player, Project Management
- **Languages :** C++,Java ,Python

## TRAINING

### Data Structures and algorithms using CPP from Board Cipher Schools

Aug 2024

- 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.
- Conducted 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:

Nov 20- Dec20

- 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:

Sep21 – Nov22

- 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:

Mar22 - Apr20

- 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

- |   |          |
|---|----------|
| • Cloud computing by NPTEL .                                      | May 20   |
| • 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

- |   |        |
|---|--------|
| • <b>Leet code problem solving:</b><br>Solved <b>100+</b> problems on LeetCode, focusing on Data Structures, Algorithms, and Optimization Techniques. | Feb'21 |
| • <b>Certified - Cipher Schools:</b><br>Completed "Data Structures with C++," gaining expertise in programming and analytical techniques.             | Jul'22 |

## EDUCATION

### Lovely Professional University

Bachelor of Technology - Computer Science and Engineering; **CGPA: 6.37**

Punjab, India  
Aug'22 - present

### Ravi Junior College

Intermediate; **Percentage: 84.5 %**

Andhra Pradesh, India  
Apr'20 - March'22

### Sri Chaitanya School

Matriculation; **Percentage: 100%**

Andhra Pradesh, India  
Apr'19 - March'20