

Madhupa Vinod

Kerala, India

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Summary

Aspiring Data Scientist with a strong foundation in mathematics, statistics, and data science, skilled in Python, SQL, and machine learning. Experienced in deep learning (CNNs, U-Net, VGG), predictive modeling, and data analysis. Passionate about applying data-driven methods to solve real-world problems and proficient in end-to-end model development and deployment.

Core Competencies

Programming & ML: Python, R, SQL, JavaScript, HTML; TensorFlow, Keras, Scikit-learn, Deep Learning, CNNs, Neural Networks

Data Analysis & Tools: Pandas, NumPy, Matplotlib, Seaborn, Data Visualization, Statistical Modeling; PostgreSQL, Flask, AWS, Git, Jupyter, OpenCV

Education

Christ University Bangalore

Master of Science Data Science

2024–Present

Miranda House University of Delhi

Bachelor of Science Mathematics

GPA 8.13

2020–2023

Government Higher Secondary School Puthur

Higher Secondary School

97.5%

2017–2019

Work Experience

Seroo IT Solutions–Software Development Intern

April 2025–May 2025, Kochi

- Developed chatbot application using Python, HuggingFace, and Flask APIs resulting in 40% faster query resolution
- Implemented PostgreSQL database integration handling 10,000+ user records with 99% uptime
- Collaborated with 5-person development team to deliver project 2 weeks ahead of schedule

NDTV– Data Analyst Intern

May 2024–June 2024, Delhi

- Processed 100,000+ voting records using Python and SQL for real-time election coverage
- Created data visualizations and statistical reports with 99.9% accuracy for live television broadcast
- Reduced data processing time by 50% through automated ETL pipeline development

Smart India Hackathon 2025 – AI-Powered Crop Advisory System (Selected Idea Submission)

2025, Bangalore

- Participated with team “Neeli” in SIH 2025 under the theme *Agriculture, FoodTech & Rural Development*
- Proposed an AI-powered crop advisory system integrating **weather, soil, satellite, and IoT data**
- Outlined a backend solution using **Flask** and **MySQL** with AI models (**LSTM, LightGBM**) for localized guidance
- Idea **selected to the next round** of SIH 2025 for further evaluation

Projects

Image Restoration Deep Learning Project

August 2025

- Developed CNN model for artwork restoration using TensorFlow achieving 80% similarity score
- Trained model on 6,000+ historical images with data augmentation techniques
- Improved reconstruction quality by 20% using U-Net and VGG architectures

Stock Price Prediction using LSTM (Finance Domain)

August 2025

- Analyzed 3,300+ daily stock records of Adani Ports from Kaggle, performing data cleaning, EDA, and trend visualization
- Developed and optimized an LSTM-based ANN with MinMax scaling and dropout regularization
- Forecasted closing stock prices, demonstrating practical time-series prediction capabilities

Hospital Management Web Application

December 2024

- Built full-stack web application using HTML, CSS, JavaScript, and Flask framework
- Implemented patient database management system supporting 500+ patient records

Bharat Intern – Data Science Project

March–April 2024

- Built convolutional neural network image classifier achieving **92% accuracy** using transfer learning on **5,000+ image dataset**
- Optimized preprocessing pipeline and evaluation metrics, delivering **15% performance improvement** over baseline model

Certifications and leadership

Certifications: Google Data Foundations, IBM Machine Learning, Infosys JavaScript, AWS Cloud Foundation

Leadership: SPICMACAY Member, Origin Quiz Coordinator, NSS Volunteer (**120+ hours**)