Malai Raj R

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Portfolio

Profile

Data Science student with practical experience developing machine learning models and full-stack analytical applications. Skilled in Python, SQL, ML pipelines, and data visualization, with the ability to convert raw data into actionable insights. Built multiple end-to-end projects involving predictive analytics, web deployment, and cloud-based data workflows.

EDUCATION

M.Sc., Data Science [Integrated] 2023 – Present
COIMBATORE INSTITUTE OF TECHNOLOGY
CGPA: 7.04/10 (Till 4th semester)

Higher Secondary 2021 – 2023
GREEN VALLEY MATRICULATION SCHOOL
Grade: 87.6%

SKILLS

Languages
Python, Java (Basics)

Web Development
HTML, CSS, Javascript

Web Development Framework
Flask, Django

Technologies & Tools
MySQL, MongoDB, Firebase

Soft Skills
Leadership, Team Work, Critical Thinking

Areas of Interest — Beginner
Machine Learning, Data Analysis, Web Development

Projects

SympAI — AI-Powered Symptom Checker
- Built an NLP-based pipeline that extracts 10+ symptom patterns from text/voice inputs and maps them to likely medical conditions with high consistency.
- Engineered a React + Node.js interface connected to HuggingFace/BERT APIs and Firebase auth, reducing response time to under 1.4 seconds for medical insight retrieval.

Smart Mask Recommendation System — Python + Flask (Rule-Based AI Engine)
- Designed a multi-factor scoring engine evaluating 6+ environmental and health indicators to suggest optimal mask types with risk scores.
- Implemented Flask REST APIs and a responsive UI (HTML/CSS/JS), enabling users to obtain real-time recommendations in < 1 second per request.

Student Failure Prediction System — Machine Learning (Python + Streamlit)
- Trained and compared 5 ML models (Logistic Regression, Random Forest, SVM, XGBoost, LightGBM) on 1,000+ synthetic student records; selected the best-performing model using F1-Score.
- Created a Streamlit dashboard providing real-time Pass/Fail prediction with probability outputs and model accuracy reaching ~90% on test data.

Certificates

LOGIC LOOP
Participation | Talos | CIT Chennai

Linux Workshop
FOSS Club, CIT Coimbatore

TRIATHLON
Axios, PSG Tech Coimbatore