Malay Jain

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Education

St. Joseph's Convent S.S. School, Sagar *June 2022*
12th PCM | 84.2%

Sagar Institute of Research and Technology, Bhopal *June 2026*
B.Tech. in Artificial Intelligence and Machine Learning | CGPA: 7.77

Publications

Code Copyright: **A Model for Prediction of Cardiovascular Diseases Using Machine Learning** *Aug 2024*
(Sagar Institute of Research and Technology)

Malay Jain, Brajesh Singh Ahirwar, Shubham Rahangdale, Aniket Kumar Mishra

Registration Number: L-157174/2024

Copyright of the code was achieved of the Machine Learning Model. The **research paper** still under review was presented at the International Research Conference.

Projects

A Model for Prediction of Cardiovascular Diseases Using Machine Learning git-hub/repo *Jun 2024*

- Developed a predictive model for the early detection of cardiovascular disease using a **Random Forest Classifier (Gini Impurity)** on a data set of 1,000+ records.
- Achieved **81% accuracy** and **95% precision** through rigorous data preprocessing and feature encoding using one-hot encoder.
- Secured **copyright** for the code; research paper currently under review for publication.

SAVE THAT GRAVY: FOOD WASTE MANAGEMENT PLATFORM git-hub/repo *Aug 2024*

- Devised a **predictive analytics system** which will allow food caterers to **reduce food waste by 20%** by accurately forecasting meal demand.
- Trained ML models, **Linear Regression and ARIMA**, to analyze consumption trends, **reducing overproduction by 40%** and **boosting cost efficiency**, achieving **85% accuracy**.
- Full-stack application with a **Python backend**, and **MySQL database**.
- **Implemented an inventory system** that **reduced spoilage by 25%**, tracked stock levels, monitored expirations, and **automated NGO alerts**, leading to a **20% increase in food redistribution for charity**.

AI Powered Solar and Wind Energy Forecasting git-hub/repo *March 2025*

- Created a **forecasting platform** leveraging machine learning to forecast solar and wind energy generation, **enhancing operational efficiency by 40%**, while processing a dataset of **36,000+ rows**.
- **Engineered** a **hybrid XGBoost + LSTM** model for solar energy forecasting and a **hybrid XGBoost** model for wind energy prediction, **reducing forecasting errors by 30%** across diverse environmental conditions.
- **Achieved 95% accuracy** in solar and **91% accuracy** in wind energy forecasting.
- **Deployed** a robust **API enabling real-time integration** of predictive insights into the company's dashboard, which may **reduce decision-making time by 50%**.

Technologies

Languages: C++, C, Python, SQL.

Technologies: Flask, Git, TensorFlow, Azure, Kubernetes, Docker, MySQL Workbench, Excel.

Achievements

- **3rd positions** won among total 25 national teams at **1 Billion row data analysis** at IIT-BHU.
- **5th position** among total 30 selected teams in the **National Level Hackathon** held at IIT-BHU.
- **Copyright of code** of the A Model for Prediction of Cardiovascular Diseases Using Machine Learning
- Presented **Research Paper** at **International Research Conference** held at IIT-Mandi.
- **GDG Campus Ambassador promoting** various **Google Technologies** and **coding culture** in college.