

# Vishwa R

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## EDUCATION

### Coimbatore Institute of Technology

*M.Sc Decision and Computing Sciences – CGPA: 7.91/10.0*

Coimbatore, India

2021 – Present

## EXPERIENCE

### Data Science Intern

2024 – 2025

*Prediscan Medtech*

*Chennai, India*

- Led a research initiative to develop HDL cholesterol prediction models using computer vision on retinal imaging datasets, enhancing diagnostic capabilities and reducing reliance on traditional invasive blood-based testing methods.
- Developed an AI-powered clinical biomarker extraction solution utilizing fine-tuned large language models and deep learning computer vision frameworks on retinal fundus images, achieving 98.5% R<sup>2</sup> accuracy and 99.9% correlation coefficient for cardiovascular risk assessment.
- Designed and implemented automated data preprocessing pipeline managing 6,000+ retinal images with sophisticated augmentation techniques, optimizing image standardization protocols and accelerating feature extraction workflows for machine learning model training.

## PROJECTS

### HR Attrition Prediction System | *Python, Flask, Plotly, Dash*



- Performed extensive data cleaning and preprocessing on IBM's HR dataset, followed by statistical analysis to identify a 16.12% employee attrition rate.
- Implemented and evaluated predictive models including Logistic Regression and Random Forest, achieving up to 87.75% accuracy.
- Identified key attrition drivers such as Monthly Income, Age, Over Time, Years Since Last Promotion, and Job Satisfaction, and recommended targeted retention strategies to minimize churn.

### National Rail Performance Insights Dashboard | *Python, Power BI, Excel*



- Cleaned, transformed, and modeled a 31,653-record railway travel dataset using Power BI and DAX queries to prepare an interactive performance dashboard and generate actionable business insights.
- Analyzed on-time performance and refund trends, identifying an 81% on-time rate and diagnosing key disruption causes including signal failures, staffing shortages, and weather conditions — informing operational improvement strategies.
- Extracted and presented insights on passenger behavior to support targeted service enhancements and policy revisions, increasing decision-making efficiency among key stakeholders.

## TECHNICAL SKILLS

**Programming:** Python, R, SQL, NodeJS

**Data Science & ML:** Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Matplotlib, Seaborn, spaCy, Beautiful Soup

**Web Development:** Django, Flask, FastAPI

**Databases & Cloud:** MySQL, MongoDB, Google Cloud Platform

**Tools & Platforms:** Microsoft Excel, Microsoft Power BI, Tableau, Jupyter Notebook, Google Colab, VS Code, Cursor AI, Git, GitHub, LangChain

## SOFT SKILLS

Flexible | Curiosity & Innovation | Continuous Learning | Cross-functional Collaboration

## ACHIEVEMENTS

- SensAI × HyperVerge Hackathon Top 10 Finalist: Developed a multilingual real-time AI feedback system with native script and phonetic transliteration using Python and NLP frameworks.
- redBus Data Decode Hackathon Top 31/690 participants: Built AutoGluon-based machine learning models for 15-day advance bus demand forecasting, ranking in the top 4.5%.
- Achieved Kaggle Expert status by excelling in competitions and actively participating in hackathons, expanding proficiency in data science and machine learning.