RAJAN RAVINDRA LAWANE

ACADEMIC QUALIFICATIONS

Year	Degree /Board	University /Institution	%/CGPA
2025*	Post Graduate Diploma in Business Analytics	IIM Calcutta, IIT Kharagpur, ISI Kolkata	-
2021	B.E. Electrical Engineering	Government College of Engineering , Nagpur	8.52/10
2017	CLASS XII	Yeshwant Mahavidyalaya, Wardha	73.38 %
2015	CLASS X	SHV, Wardha	92.4 %

KEY SKILLS/TOOLS Machine Learning, Data Visualization, Statistical Data Analysis, NLP, Python, R Programming, SQL, Excel

AWARDS AND ACHIEVEMENTS

ACHIEVEMENTS

- Earned a **Special Prize** at the **state-level MTSE exam** for exceptional performance and problem-solving skill
- Attained a **position in the top 0.7 percentiles** in the MBA-CET exam in 2023, reflecting exceptional aptitude

Case Competition

- **Achieved 1st place** at Pitch Forge Frenzy 2023, excelling in IIM Rohtak's **national pitch deck competition**.
- **Ranked 4th** (out of 1218 teams) in Zenith 2.0 2023, **Business Case Competition** conducted by IIM Calcutta.
- **Ranked 4th** (out of 420 teams) in Statistella 2024, **Data Analytics Case Competition** organised by IIT BHU
- **Ranked 8th**(out of 763 teams) in Ad-War-Tize 5.0'23, **Marketing case** Competition conducted by IIM Raipur

Certifications

- Earned **Google Python Certification** in 2022, showcasing proficiency in Python & advanced coding skills.
- Obtained Engage7x **Analytics & Data Science Certification** in 2022, showing skill in data-driven approach.

ACADEMIC PROJECTS

Airbnb Price Prediction using Regression models

- **Predicted listing price** for 75k+ Airbnb properties (26 features) with **linear & polyno. regression** models
- Treated outliers; Tackled multicollinearity (**VIF and backward selection**); Applied **Ridge regularization**
- Analyzed residuals with **KS test & QQ plt**. | Built **DT, RF & XGB regressor**; **↑R2 by 23% to 0.75 with XGB**

Cardiovascular Disease Detection (Classification)

- Built a **hybrid heart disease classifier** on 4k+ patients' data | Addressed 6:1 class imbalance using **SMOTE**
- Executed **EDA**, **Iterative & mode imputation** for missing values and handled outliers via **Isolation Forest**.
- Trained a **hybrid KNN + Random Forest + Logistic Regression classifier** using **GridSearchCV** and **cross-validation** techniques, achieving an **AUC of 0.87**, along with a positive class **recall of 0.97** & **F1 Score of 0.89**.

Employee Attrition Prediction (Deep Learning)

- Developed a **Neural Network Model** using IBM dataset for identification of the **Employee Attrition** Patterns
- Performed EDA, **Label encoding**, **scaling,** SMOTE, & **hyperparameter tunning** using the **genetic algorithm**
- Outperformed **Logistic Regression**, **SVM**, **Decision Tree**, **RF, XGB**, & matched top model on balanced data.
- Achieved an **AUC-ROC of 0.81** with a **2.25%↑ in accuracy** and a **2.27%↑ in F1 Score** on imbalanced data.

Automated Resume Screening using NLP enabled model

- Developed an **Unbiased Resume screening Model** using 2300+ resumes & 23 JDs across several domains
- Labelled the dataset by calculating **cosine similarity** between JD & Resume using **TF-IDF Word-embedding**
- Extracted Features using **Word2Vec**& Applied SVM, **Bi-LSTM& BERT** to obtain best **Precision score of 0.78**

Demand Forecasting of Intermittent Time Series

- Categorized **3548** products demand into **4** categories (Intermittent, Smooth, Lumpy & Erratic) based on **SBC**
- Forecasted the weekly demand of **380 intermittent TS** using 155 weeks data with **Croston, ADIDA & MAPA**
- Selected the **best models** for each TS based on the **minimum MASE and NOS** | ADIDA performed the best

Portfolio optimization (Finance)

- Collated over 18 months of **daily stock prices of 20 NSE-listed firms** to find **optimal investment portfolio**
- Used **Markowitz** as a base model; Employed **Hidden Markov Model**(5state) , calculated **transition matrix**
- HMM outshoned Markowitz with **return 1.25 (34%↑),volatility 0.18 (16%↓) & Sharpe ratio 7.09 (59%↑)**

ADDITIONAL PROJECTS

Customer Segmentation and Recomm. system

- Built **clustering model** to segment customers & build **recommendation system** out of **5Lakh+** data points
- Explored behavioural patterns & performed **RFM analysis**, Identified & defined **3 clusters** using **K-Means**
- Achieved **silhouette score** of 0.3&applied cluster-based **collaborative filtering** to recommend top 10 items.

Demand Forecasting of Sales

- **Forecasted drug sales** based on 13 yrs historical data and checked **stationarity** of data using the **ADF test**
- Analysed **ACF-PACF** plots for order of **SARIMA** model & **Ljung-box** for the residual autocorrelation analysis
- Selected best model using **gridsearch** based on **AIC&BIC**, obtained **MAPE of 8%** using best **SARIMA** model

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

Position of Responsibility

- Spearheaded responsibility of **badminton coordinator** at GCOE, Nagpur in **2019-20,** contributed to Manage Sports budget of **3Lakh+** & enhanced resource allocation and handled the training sessions of university team.

Sports

- **Winner** of the **District-level badminton championship** organized by Ministry of Sports and Youth Welfare.
- Represented GCOE, Nagpur at the **Inter-Collegiate Badminton Tournament** organized by RTMNU, Nagpur

Quizzing

- **1st rank** in district-level quiz competition conducted by Sewayog Sanstha, demonstrating general awareness.
- **2nd rank** in a district-level quiz conducted by Lokmat News Group, showcasing knowledge and critical skills.

Events and Fest

- Coordinated Badminton event at SFOORTI 2020, managing schedule for over **50+ students** across **10 teams**.
- Spearheaded the team of publicity in Adhyaay'19, **↑student footfall by 20%** by enhancing the event visibility

ELECTIVES : NLP, Healthcare Analytics, SCA, FRM **INTERESTS : Badminton, Cricket, F1**