## RAYANKULA AKHIL



				CALCUTTA	
ACADEMI	C QUALIFI	CATIONS			
Year	Degree /Board		University /Institution	%/CGPA	
2025*	Post Graduate Diploma in Business Analytics		IIM Calcutta, IIT Kharagpur, ISI Kolkata	-	
2019	В	. Tech (Hons.) Mechanical Engineering	Indian Institute of Technology, Kharagpur	6.69/10	
2015		CLASS XII	Narayana Junior College	96.7 %	
2013		CLASS X	V. V. Central Public School	10/10	
KEY SKILL	S/TOOLS	Statistical Inference, ML, Predictive N	Modeling, DL, NLP, Python, R Programming, SQL, Table	eau, Office 365	
WORK EX	KPERIENCE	(38 Months)			
Reliance Industries Lir		mited Manager Jamnagar (Jul '19 - Sep '2			
Roles and Responsibilities		■ <b>Planned</b> and <b>Monitored</b> maintenance activities of <b>1000+</b> rotary and static equipments at FCC/PRU plant			
		■ Effectively managed <b>20+</b> supervisors, and <b>500+</b> workers, ensuring compliance with statutory requirement ■ <b>Forecasted</b> spares requirements, <b>optimized</b> inventory, and <b>automated</b> procurement for timely availability			
		■ Trained 3 new FTEs on SAP-PM/MM & R-CoW at FCC during high attrition, while managing daily activities			
Achievements/Impact		■ Awarded R-Sammaan for detecting CW pump shaft failure proactively, preventing potential ₹1.5 Cr+ los			
		■ Implemented R-CoW, analyzed 2000+ permits, reducing them by 40%   Rated A+ for 2 consecutive year			
Projects		■ Commissioned rotary equipments for South Asia's inaugural Halo-Butyl Rubber plant in Jamnagar, Indi			
		■ <b>Scheduled</b> tasks and <b>procured</b> necessary materials for a project increasing HPIB plant capacity by <b>130</b> ■ <b>Led 5+</b> turnarounds, balancing manpower and <b>inventory</b> , ensuring <b>100</b> % compliance to timelines & safe			
AVAARRO	AND ACI		ower and <b>inventory</b> , ensuring 100% compliance to the	neimes & saie	
AWARDS AND ACHIEVEMENTS					
Scholastic Achievements		■ Achieved <b>Top 0.10%</b> in JEE Advanced 2015 and <b>Top 0.68%</b> in JEE Mains 2015 among <b>12+ Lakh</b> applican ■ Achieved <b>99.16%</b> in CAT 2022   Ranked <b>392 (Top 0.28%)</b> among <b>1.39 Lakh</b> applicants in TS EAMCET'1			
Case Competitions		■ National Finalists out of 670+ registrations in "6 Degrees", Analytics competition organized by IIM Trich			
		Runner-up in FinOverse, a FinTech Strategy Case Competition, by Masters' Union, out of 1022 participan			
ACADEMI	C PROJECT	rs .			
Length of Stay prediction (Regression) Vehicle Sales forecasting (Time Series)		■ Built Regression models to predict Length of stay of patients on a dataset (100K+ records, 27 attributes			
		Addressed Multicollinearity using VIF   Applied OLS & polynomial regression; Lasso for feature selection			
		■ Employed <b>Residual analysis</b> for model <b>validation</b> , <b>outlier</b> detection   Improved <b>R2</b> (22%↑) using <b>XGBoo</b>			
		Forecasted vehicle sales for 12 months using past 10 years data; removed trend by 1st order differencing Parformed STL decomposition. Checked stationarity using ADE tests. Applying ACE PACE plats for SARIM			
		■ Performed <b>STL decomposition</b> ; Checked stationarity using <b>ADF test</b> ; Analyzed <b>ACF-PACF</b> plots for <b>SARIM</b> ■ Used <b>Ljung-Box</b> for residuals; Selected best model using <b>AIC &amp; BIC</b> ; Achieved <b>MAPE</b> of <b>5.78%</b> on test da			
Deep Topic Modelling (Text Analytics)		Created a <b>topic modeling</b> framework on iPhone reviews; <b>preprocessed</b> the text ( <b>tokenized</b> , <b>lemmatize</b> )			
		Applied Latent Dirichlet Allocation (LDA); Identified six optimal topics based on <b>coherence score</b> metric			
		■ Increased coherence score (↑11%) using Supervised Deep Topic Modeling, integrating BERT and K-Mea			
		■ Identified 6 top <b>topics</b> : Camera, Service, Battery, Value for Money, Customer Support, and Amazon Delive			
Beverage Sales		Optimised supply chain on the distribution side and simulated alternate strategies for a beverage compa			
(Supply Chain Optimisation)		■ Forecasted demand using <b>SARIMA &amp; Holt-Winters</b> and evaluated the current demand fulfillment using <b>LI</b> ■ Suggested D2C, warehouse addition, Outsourcing; lead to <b>6.8%</b> in <b>profits</b> and 100% <b>demand satisfaction</b>			
ADDITIONAL PROJECT					
Credit Card Default Prediction		■ Built <b>classification</b> model for credit card default prediction on <b>30K+</b> historical credit dataset & <b>24</b> featur			
		Applied Oversampling (SMOTE) for balancing data; used Logistic Regression, Random Forest and XGBoo			
		■ Performed hyperparameter tuning and improved F-beta score from .80(LR) to .84 & attained AUC of 0.8			
News Topic Classification (NLP) Image Classification		■ Built a model to <b>classify news</b> articles into 4 topics (World, Sports, Business, Science) using <b>2.5K+ article</b>			
		Leveraged <b>Word2Vec</b> embeddings, trained an Artificial Neural Network to achieve a <b>macro F1-score</b> of <b>0.4</b>			
		Applied bi-directional RNN, LSTM [macro F1-score:0.67]; attained a higher macro F1-score 0.90 with BER			
		■ Developed an ASL image classifier to identify 36 different signs from 2.5k+ images using transfer learning			
(CNN)  Customer Profiling (Clustering)		■ Employed ResNet50 and InceptionV3, achieved 95.7% accuracy with ResNet50 after Data augmentation			
		■ Segmented <b>9K+</b> credit card users by spending patterns for targeted marketing; used <b>PCA</b> for cluster profilir Used <b>Elbow-plot</b> to find <b>opt K</b> ; Achieved <b>Silhouette Score</b> (0.4), <b>Davies Bouldin Index</b> (0.8) with <b>K-Mean</b>			
(Grust	6)	with K-Mean			

## POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

**PGDBA Magazine** Team

- Contributed articles on **Big Data** Retail's Transformation and **GPU**s The Parallel Processing Powerhouses
- $\begin{tabular}{ll} \blacksquare & Conducted \& curated {\it interviews} & of esteemed a cademicians and industry practitioners in the ML community {\it otherwise} & {\it oth$

Basketball ■ Winners-Section Wars (IIM C); Sangharsh (Inter-IIM) Contingent member; Captain of SBP Hall (IIT Kgp) '24

ELECTIVES: FRM, NLP, PRO, Games & Information, SAAPM

INTERESTS: Basketball, Carroms, NBA