

ACADEMIC QUALIFICATIONS

Year	Degree /Board	University /Institution	%/CGPA
2025*	Post Graduate Diploma in Business Analytics	IIM Calcutta, IIT Kharagpur, ISI Kolkata	-
2019	M.Tech (Integrated) Chemical Engineering	Indian Institute of Technology Kanpur	7.33/10
2018	B.Tech Chemical Engineering	Indian Institute of Technology Kanpur	6/10
2014	CLASS XII	Kendriya Vidyalaya no. 1 Gaya	89 %
2012	CLASS X	Kendriya Vidyalaya no. 1 Gaya	10/10

KEY SKILLS/TOOLS Statistical Inference, Business Impact Analysis, Problem-solving, ML, Python, Power BI, SQL, R, C++

WORK EXPERIENCE (24 Months)

Galaxy Surfactants Ltd		Officer - New Project Technology	Mumbai (Jul '19 - Jul '21)
Process Improvement	<ul style="list-style-type: none"> Reduced Fatty Acid Ester's BCT; ↑ reaction rate by 35% which ↑ prod. by 30% & ↓ ₹ 50 lakh/yr in opt. cost Applied Double Exp. Smoothing and ARIMA models for parameters Optimization & demand forecasting Saved ₹ 1.5cr. opportunity cost by aligning production with prod. demand forecasted; ↑ SC efficiency by 10% 		
Sustainable Product Optimization	<ul style="list-style-type: none"> Saved ₹ 54 lakhs/yr by reusing byproduct as ingredient in sunscreen production; increased yield by 10% Conducted lab trials; analysed data using visualization; Identified & optm critical parameters for stability Applied quality controls; kept recycled materials impurity within a 3-sigma range; ↓ material cost by 13% 		
Brown Field Project	<ul style="list-style-type: none"> Transitioned manual plant to semi-auto, human need ↓ by 45%; using MATLAB optmz. ctrl sys & interlocks Conducted HAZOP; leveraged large data to identify patterns & correlations - potential failures ↓ by 60% 		
New plant Budget	<ul style="list-style-type: none"> Optimized SVCOI based on demand forecasts & prod. planning to estimate production budget for new plant 		

AWARDS AND ACHIEVEMENTS

Academic Achievements	<ul style="list-style-type: none"> Achieved Reg. Rank 2(AIR-31) & rank 3(AIR28) in KVS Junior Mathematics Olympiad for consecutive years Secured International Ranks 532 and 1456 in the 6th and 4th International Mathematic Olympiads Honoured with a Merit Certificate in AISSE for excellent performance with a perfect CGPA of 10
Case Competitions	<ul style="list-style-type: none"> Secured a top finalist standing in Orion Synergy23 out of 1.8k+ participants, organized by XLRI Jamshedpur Attained finalist standing in Exchequer at Red Brick Summit, IIM Ahmedabad, among 1.7k+ participants
Certifications	<ul style="list-style-type: none"> Completed certifications on Machine learning A-Z: AI, Python & R; The complete NN Bootcamp: Thy & App

ACADEMIC PROJECTS

Demand Forecasting (Time Series)	<ul style="list-style-type: none"> Performed Time Series analysis on 6 yrs electrical consump. & prod. data; Assessed stationarity (ADF test) Determined ARMA order examining ACF, PACF plots, with AIC, BIC; Achieved a precision MAPE of 1.70% Guided energy trading & coal energy prod. decisions (4 cr. profit); with SARIMA, VARMA & LSTM models.
Bone Marrow Classification (CNN)	<ul style="list-style-type: none"> Developed CNN model for automating bone marrow classification using 170K+ labeled images of 6 classes Exercised batch normalise & early stop; Generated saliency & occlusion heatmap for output visualisation Leveraged transfer learning with EfficientNet & VGG16 models; Improved test accuracy from 90% to 93%
Credit Card Fraud (Graph ML)	<ul style="list-style-type: none"> Built Graph-based credit-card fraud detection model with dataset of 200k+ observations and 22 features Represented data as graph-network via networkx; used the Louvain algorithm for community detection Generated Graph Embeddings using Node2Vec; applied Logt. Reg, RF, SVM, DT; recall 0.9 & F1 score 0.73
Other Projects	<ul style="list-style-type: none"> Portfolio Optimization (Markovitz, SVR) ■ MNIST Digit Classifier (RF, DT, NN) ■ Sales & Inventory Mang.

ADDITIONAL PROJECTS

Cars24 Live Project (Regression)	<ul style="list-style-type: none"> Implemented a regression model to predict current Car valuation by leveraging 100K+ records & 21 features Handled multicollinearity using VIF; Used Box-Cox transformation and Analysed Residuals using Q-Q plot Applied DT, RF, LGBM and XGBoost after MLR; Achieved R2 to 0.931 and Reduced RMSE by 14.5% to 0.266
Airtel AF Live Project (Classification)	<ul style="list-style-type: none"> Developed a binary classifier for churn prediction in telecom subscribers using 2M records & 30+ features Handled class imbalance using SMOTE & scale_pos_weight; trained LR, KNN, RF, XGBoost and Adaboost Achieved best recall of 0.89 and ROC-AUC of 0.86; Reduced churning from 7% to 3% by giving target offers
GenAi	<ul style="list-style-type: none"> Developed ChatBot using Gemma-2B LLM, Fine-tuned with LoRA on 1K Q&A from Databricks; BLEU: 0.65
StackOverflow Qn Status (NLP)	<ul style="list-style-type: none"> Predicted StackOverflow question status from 40K+ text; Word2Vec embedding followed Random Forest Recall 51% with RF; Improved up to 68% (F1 score 0.63) using BERT Encoder & fine-tuned BERT model
Targeted Ads (Clustering)	<ul style="list-style-type: none"> Segmented E-commerce customers using 5L+ invoice data; performed feature engineering and RFM analysis 3 segments & cluster profiling using KMeans, Agglomerative, DBScan; Silhouette score 0.92, DB index 0.29

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

Event Manager	Organized Mr. & Ms. Antaragni event, leading 120+ students, sponsored YouTube channels & R.J. as judges.
Club Coordinator	Organized workshops on Autodesk3ds Max software & Sculpture event in Spectrum with 100+ participants.

ELECTIVES : Deep Learning, Compt. Finance, FRM, Bayesian, BA

INTERESTS : Manga & Light Novel

