PARTH PANDEY

ACADEMIC QUALIFICATIONS

Year	Degree /Board	University /Institution	%/CGPA
2025*	Post Graduate Diploma in Business Analytics	IIM Calcutta, IIT Kharagpur, ISI Kolkata	-
2021	B.Tech Mechanical Engineering	Indian Institute of Technology Kanpur	7/10
2016	CLASS XII	Disha Delphi Global Senior Secondary School	83.2 %
2014	CLASS X	Aditya Birla Public School	9.6/10

KEY SKILLS/TOOLS Time Series Forecasting, Statistical Inference, ML, NLP, DL, Python, R, SQL, Tableau, PySpark, Excel

WORK EXPERIENCE (23 Months)

Sterlite Technologies — **Business Analyst** — **Hyderabad (Aug '21 - Jul '23)**

Project Monitoring and Control	■ Spearheaded implementation of **DMAIC** and **Six Sigma** to improve Cycle Time and Defect Removal Efficiency ■ Performed **Hypothesis Testing** & **Linear Regression** to identify root cause in process performance model ■ Drive action plan and improved cycle time from **300 to 186 days (38% ↓)** TAT and increased DRE by **35%**
Quality Analytics (NLP)	■ Built multi class classification model on **20k** incidents for **FTR**; used text pre-processing, **TFIDF** embedding ■ Employed Multinomial **Naïve Bayes** achieving accuracy **80%**, improved it to **91%** with **Random Forest** ■ Analyzed incidents based on category, region resulted in reduction of **70% incident** and saving of ~**Rs 40 L**
Automation and Dashboarding	■ Developed BoQ generation using **Python** resulting in submission of **7000+** Service Invoicing worth **Rs 70 Cr** ■ Build **SQLite** database of EB Bill through extraction of fields from **10K** POPs of 3 Authorities using **Selenium** ■ Created a **Tableau** dashboard for EB Bill, MB record & AT to track project progress and generate key insights
ACHIEVEMENTS	■ Awarded **Star Performer** of the Quarter in Oct'2022 for driving **automation** with team of 3 in BoQ Invoicing ■ Collaborated with PMO team to help STL Service Business achieve the prestigious **CMMI Level-5** certification

AWARDS AND ACHIEVEMENTS

Scholastic Achievements	■ Ranked **AIR 1138 / 1.5 Lakhs**+ in **JEE Advanced'17** and ranked **AIR 1575 / 1.1 Million**+ in **JEE Mains'17** ■ Achieved **99.89 percentile (QA)** and **99.04 percentile (overall)** out of **2 L+** candidates in **CAT 2022** exam
Competition	■ Ranked **3rd** in **GenAI** based Unifi PDF ESG Metric lifting Competition worth **$5 K** by **Zindi South Africa'24** ■ Ranked (**3/112**) in Product Data Classification Challenge, by **Rakuten Institute of Technology Paris'24** ■ Ranked **(2/385)** in Networsify, IIT KGP'23 worth **Rs 30 K** | Ranked (**8/940**) in IDB Analytics, IIM Calcutta'23
Certification	■ Certified Six Sigma Green Belt- MQAS, 2023; Certified Python Financial Analytics- Henry Harvin Analytics'20

ACADEMIC PROJECTS

House Price Prediction (Regression)	■ Predicted listing price for **70k+** Airbnb properties (**26 features**) with linear and 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 **XG Boost**
Multimodal Classification (DL)	■ Pre-processed an ecomm. multimodal dataset (text+image) of **99k** products to classify them into **27 classes** ■ Fine-tuned the pretrained models (unimodal): **ResNet50** for image [**0.6**] & **BERT** for text [**0.87**] [**F1-score**] ■ Combined image & text inputs into **multimodal framework** (**0.3**↑ in **F1**-score over image-only classifier)
Foreign Tourist Forecast (Time Series)	■ Forecasted monthly Foreign Tourist Arrival in India using **15 years** ITS data, removed **trend** and **seasonality** ■ Identified stationarity using **ADF test**, **AR MA** orders by **ACF-PACF** plots, residual analysis by Ljung-Box test ■ Tuned **SARIMA** model and achieved **3.7% MAPE**; Improved to **3.03%** using USD index as **exogenous** var.
Customer Segmentation (Clustering)	■ Performed **customer segmentation** on a retail trans. dataset (**3.5 L** obs.) for targeted marketing campaigns ■ Implemented **RFM** analysis for feature engineering; applied PCA; used **K-means**, **agglomerative** and DBScan ■ Identified opt. **4** segments with customer profiling by **elbow** method; silhouette score **0.83** & DB index **0.41**

ADDITIONAL PROJECTS

Volatility Prediction (Financial Risk Management)	■ Developed model to predict **Alphabet Inc**. stock price volatility, tested **stationarity** of log returns by ADF ■ Utilized **GARCH** model by performing **LM** test for **ARCH** effects and **ACF/PACF** analysis of **squared returns** ■ Improved **MAPE** from **12%** (obtained for the GARCH) to **5%** by using **LSTM** trained with the **rolling sd** data
Chatbot Assistant (GenAI)	■ Developed **chatbot** for disease surveillance that answers based on **6 TG** Booklets using **RAG** and **Langchain** ■ Created **embeddings** with sent. transformer and stored in **Chroma** db; designed chain with **Retrieval QA** ■ Generated response with **Llama-2** LLM, got **ROUGE-1-gram** score of **0.51**; deployed on **Streamlit** interface
Health Insurance Fraud Detection (Classification)	■ Built classifier to detect fraudulent claims from **1L** records, Applied SMOTENC to treat class imbalance (99:1) ■ Performed **EDA**; Trained **Logistic** and **XGBoost** classifiers. Hyper params. tuning through **Grid-Search CV** ■ LR setting at opt. threshold (**0.61**) gave a best **precision** score of **0.91**; Feature importance using **SHAP** plots

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

National Competition ■ **Silver medalist** in Table Tennis event, Udghosh'18, IIT K; Represented twice in **Inter IIT Sports Meet'18,19**

ELECTIVES : DL, Econometrics , Computational Finance | **INTERESTS : Cricket, Stock Market, Pool**