

ACADEMIC QUALIFICATIONS

Year	Degree /Board	University /Institution	%/CGPA
2025*	Post Graduate Diploma in Business Analytics	IIM Calcutta, IIT Kharagpur, ISI Kolkata	-
2021	B.Tech Computer Science and Engineering	National Institute of Technology, Puducherry	86.8 %
2017	CLASS XII	Excel Public School, Mahe	96.5 %
2015	CLASS X	Katurba Gandhi Govt. H.S Palloor	96.3 %

KEY SKILLS/TOOLS

Programming, Problem Solving, Supply Chain Logistics, Python, R, Tableau, SQL, PySpark, Power BI

WORK EXPERIENCE (25 Months)

Tredence Analytics Solutions Pvt. Ltd.	Consultant	Bangalore (Jun '21 - Jul '23)
Maintenance of Dashboards	<ul style="list-style-type: none"> Maintained 50+ Tableau Dashboards for Ecommerce sector on data hosted in Databricks, GCP using SQL. Maintained 10+ Tableau & Power BI Dashboards to monitor Supply Chain related to 600 stores across US. Maintained data pipelines across databases & cloud platforms and native SQL servers using ETL software. 	
Development of Dashboards	<ul style="list-style-type: none"> Developed a Tableau dashboard tracking movement of loads between the 17 Cross Docks & 600 Stores. Developed a dashboard tracking Freight Cost paid by Suppliers to check if they are under/over charged. Developed a dashboard tracking Level of Service of Carriers moving loads from Cross Docks to Stores. Led the process of meeting stakeholders, exploring & validating potential data sources, & designing visuals. 	
Migration	<ul style="list-style-type: none"> Migrated SQL & Python scripts of 100+ lines of code each out of legacy systems to ensure zero downtime. Migrated complex ETL workflows out of Alteryx to Tableau Prep supporting data needs of several teams. 	
Automation	<ul style="list-style-type: none"> Automated Emails with updates & alerts using Tableau Prep & Python scripts saving 10+ man hrs/week 	

ACADEMIC PROJECTS

Modelling Stock Price (Regression)	<ul style="list-style-type: none"> Regressed log of Amazon's stock returns (4 years of data) with CAPM, Fama-French 3 & 5 Factor models. Tested models on 2 months of data, achieving a model with MAE of 0.0075 & Adjusted R² value of 0.519. Verified Heteroscedasticity using Breusch-Pagan test and Autocorrelation using Durbin Watson test.
Used Car Sales Forecasting	<ul style="list-style-type: none"> Forecasted the next 30 months of used-car sales in the US using SARIMA and 15 years of historical data. Decomposed the series, identified seasonality to be annual, did seasonal differencing to get stationarity. Conducted ADF tests for stationarity and examined ACF & PACF plots to identify a set of potential models. Achieved an ideal model with MAPE ~3% using AIC, BIC, & Ljung-Box statistics to verify autocorrelations
Chatbot for Medical Queries (RAG)	<ul style="list-style-type: none"> Orchestrated an RAG pipeline that answers medical queries based on PubMed articles using ChatGPT 3.5. Chunked the articles using LangChain and embedded them using a model trained in a contrastive manner. Retrieved similar chunks using FAISS vector store, passed them to the LLM as context to get the answer.
Credit Card Fraud Detection (GNN)	<ul style="list-style-type: none"> Created a heterogeneous, tri-partite graph from 2M rows of credit card transactions simulated by IBM. Trained the data with GraphSage algorithm, generating embeddings for both training & inductive nodes. Trained an XGBoost model with the training embeddings and tested them on the inductive embeddings.

ADDITIONAL PROJECTS

Freelance Project - Liveness Detection (Image Classification)	<ul style="list-style-type: none"> Collected 14k images of faces, live and spoofed, from self-taken videos, using a pre-trained face detector. Trained a CNN model on primary data to detect the liveness of a face in a camera yielding 94% accuracy. Utilized a facial landmarks detector to determine orientation of the face, ensuring accurate verification. Deployed the application as a REST API using Flask framework, Docker and Google Kubernetes Engine. Secured subscriptions from 7 companies and performed liveness verifications for over 10k+ users to date.
Photo Search Application	<ul style="list-style-type: none"> Trained an Image Captioning model with pretrained InceptionV3 model & LSTM on Flickr 30k dataset. Converted the captions (BLEU-4 score of 0.126) into keywords and embedded them using GloVe vectors. Developed a GUI using Tkinter showing photos in order of distance of the embeddings to the search tags.
Customer Segmentation	<ul style="list-style-type: none"> Calculated RFM metrics to predict CLV of online shoppers based on BG/NBD & Gamma-Gamma models. Applied RFM segmentation and K-Means Clustering based on RFM & CLV with a Silhouette score of 0.67.
Parts of Speech (Dynamic Programming)	<ul style="list-style-type: none"> Parsed the UD-English-GUM dataset and computed Transition and Emission probabilities into a matrix. Developed the Viterbi algorithm (Dynamic Programming) in Python from scratch to implement an HMM. Applied the algorithm with Add-One Smoothing to predict tags for the test dataset yielding 71% accuracy.
Coding ML Algorithms (w/o Libraries)	<ul style="list-style-type: none"> Developed a Naive Bayes Classifier in Python from scratch tuning Laplace Smoothing as hyperparameter. Wrote a Logistic Regression model tuning class weights in Python from scratch to predict loan defaults. Wrote K-Means & Agglomerative Clustering, assessed them with Silhouette Score & Jaccard Similarity.

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

State Level Chess	<ul style="list-style-type: none"> Secured 3rd Place in State Chess Championships in Puducherry in both Under-17 and Under-19 divisions.
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ELECTIVES : Games and Information , Machine Learning

INTERESTS : Chess, Football, Reading