

ACADEMIC DETAILS

YEAR	DEGREE	INSTITUTE	CPI/%
2020-2022	M.Tech. (Industrial & Management Engineering)	Indian Institute of Technology, Kanpur	9.27
2016-20	B.Tech. (Textile Engineering)	U.P. Textile Technology Institute, Kanpur	9.22
2015	Class XII (ISC)	M.T.M.H. Secondary School, Kanpur	93.25%
2013	Class X (ICSE)	M.T.M.H. Secondary School, Kanpur	92.60%

INTERNSHIP

Data Science Intern, Harvesting India Private Limited (May'21 – July'21)

Product Recommender System based on Customer Purchase History

- The aim of this project was to recommend crops to buyers based on their purchase history to increase sales
- Analyzed **data statistics**, performed **EDA**, data visualization and for generalized recommendations, **Popularity based recommender** system was built
- The project mainly focused on **Collaborative Filtering model** and both **User-based and Item-based** filtering techniques were implemented
- **Similarity measures** like Euclidean distance, **Pearson correlation**, **Cosine Similarity** were used to calculate similarities among user's behavior
- **Singular Value Decomposition (SVD)** based on Matrix **Factorization** algorithm was used in building recommender engine
- For evaluation **RMSE**, **MAE** values were used, and **Sci-kit Surprise Library** was used to build a Collaborative filter based on SVD

ACADEMIC PROJECTS

Amazon Fine Food Review Classification (Applied Machine Learning) (Mar'21 – Apr'21)

- The dataset consists of 568,454 reviews of Amazon fine food from Oct'1999 to Oct'2012 with 10 features
- Classified sentiment based on review text, performed data cleaning and pre-processing by Stop-word removal, tokenization, **Stemming**, **Lemmatization**
- Executed Feature Extraction Techniques – **Bag of Words**, **TF-IDF**, **Word2Vec**, **Avg-Word2Vec**, **TF-IDF Word2Vec**
- Applied Models – **K-Nearest Neighbors**, **Naïve Bayes**, **Logistic Regression**, **Support Vector Machine**, **Random Forest**, with k-folds CV
- Used **Accuracy**, **Precision**, **Recall** and **F1-Score** as evaluation metrics for comparing models

Analysis of Advertising media on Sales (Statistical Modelling for Business Analytics) (Aug'21 – Sept'21)

- The dataset consists of the sales of product in 200 different markets with advertising budget of three different media - TV, radio, newspaper
- Carried out **Multivariate Statistical Regression** analysis verifying all **Regression Assumptions**
- Performed **EDA**, analyzed **correlation matrix**, performed test for **heteroskedasticity**
- Checked for **multicollinearity** using **VIF** (Variance Inflation factor) and looked for **omitted variable bias**
- Feature elimination is done using **RFE** (Recursive Feature Elimination) based on **p-value** and adjusted **R-squared** value for evaluation

Store Item Demand Forecasting (Time Series Modelling for Business Analytics) (Jan'21 – Feb'21)

- Predicted 3 months of sales for 50 different items in 10 different stores from past 5-year sales data using **time series** techniques
- Decomposed Time series into its component to analyze **Trend**, **Seasonality**, and **noise**
- Checked **Stationarity** using **ADF-test** (Augmented Dickey-Fuller) and stationarised time series by **Differencing(d)**
- Plotted **PACF** (Partial Autocorrelation function) and **ACF** (Autocorrelation function) to find optimal parameters p, d, q
- **AR**, **MA**, **ARMA**, **ARIMA**, **SARIMA** time series models applied and used **RMSE** and **MAPE** as evaluation metric

Customer segmentation to define marketing strategy (Data Mining and Knowledge Discovery) (Oct'20 – Nov'20)

- The dataset consists of 541909 transactions occurring between Dec'2010 and Dec'2011 with 8 features
- Analyzed 3 customer segments based on Recency, Frequency, and Monetary, applied **Feature Engineering**, performed **Standardization**
- Used **K-Means Clustering** with 3 clusters based on **Elbow Method** and **Silhouette Analysis**
- Used **Agglomerative** and **Divisive Hierarchical Clustering** with 3 clusters based on Dendrogram

Designing bank form in HTML and storing in database (Computer Aided Decision Systems) (Mar'21 – Apr'21)

- Designed a bank form in **HTML** and stored the data into MariaDB database
- The values filled by user were passed to **PHP script** and through PHP the data was stored into database of MariaDB
- Built **Entity Relationship diagram** and **related schema** to display and analyze database and represent relationships among various entities used

COURSEWORK AND SKILLS

Academic Courses	Data Mining Probability & Statistics Applied Machine Learning Statistical Modelling for Business Analytics Introduction to Computing Market Research Operation Research Computer Aided decision System
Online Courses	Statistics for Data Science and Business Analysis Econometrics Time Series Analysis in python Python for Data Science and Machine Learning Data Visualization using Tableau
Technical Skills	Machine Learning Statistical Analysis Natural Language Processing Python (Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Statsmodels, NLTK, Regex) R PHP SPSS HTML Tableau MS Excel SQL
Soft Skills	Critical Thinking, Problem Solving, Teamwork, Effective Communication, Adaptability

POSITION OF RESPONSIBILITY

- **Senior Webinar Coordinator**, IME Department, IIT Kanpur – organized webinars and attended Guest Speakers (Aug'21 - Present)
- **PG Senator Y20, Student Council**, IIT Kanpur – responsible for bringing issues faced by PG students to the students' senate (Mar'21 - Present)
- **Junior Webinar Coordinator**, IME Department, IIT Kanpur – organized webinars and prepared Minutes of Meeting (Sept'20 - July'21)
- **Teaching Assistant** for the course Enterprise Integration with IT, IME Department, IIT Kanpur (Aug'21 - Present)

ACHIEVEMENT AND EXTRA CURRICULAR ACTIVITIES

- Awarded 5-star **Gold Badge in SQL** under specialized skills at **HackerRank**
- Secured **All India Rank 8** in TF GATE 2020 with GATE score of 859 and **99.49 percentile**
- **Silver Medalist** for securing overall **2nd rank in BTech** held at Lucknow, awarded by Dr. APJ Kalam Technical University, Uttar Pradesh
- Awarded with **Certificate of Appreciation** for securing **1st rank in BTech** in the session 2017-18 in Uttar Pradesh Textile Technology Institute
- Won **3rd prize in wall painting** in TEXUP "We Knit the World Together" 2K17 among 15 such teams held at the Technical Fest of UPTTI, Kanpur
- Secured overall percentile of 72.30 in **Indian Intelligence Test, An Innovation Aptitude Test** in 11th standard under IIT BHU