JAYDEEP SARVAKAR

M.Tech *(Industrial and Management Engineering)*

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ACADEMIC DETAILS

YEAR	QUALIFICATION	INSTITUTE	CPI / %
2020-Present	M.Tech (Industrial and Management Engineering)	Indian Institute of Technology, Kanpur	7.9*
2015-19	B.E. (Mechanical Engineering)	L.D. College of Engineering, Ahmedabad	7.20
2015	Class XII (GSHSE Board)	S.V. Highschool, Kadi	71.4%
2013	Class X (GSHSE Board)	Shree D.A. Patel Technical Highschool, Kadi	83%

**till 2nd semester*

SELF PROJECT

Forecasting SBI Stock Price with Time Series Analysis *(July'21-July'21)*

- Forecasted SBI Stock price with previous 4.5 years data, checked **Stationarity, Seasonality, Trend** using **Dicky-Fuller test**, **ACF** and **PACF plot.**
- Applied Time Series models – **AR, MA, ARMA, ARIMA, SARIMA**, **Exponential Smoothing**.
- Predicted stock price for next **45 days** (2 months), based on best tuned model **ARIMA (3,1,2) with RMSE 41.36**

ACADEMIC PROJECTS

Constructing a Markowitz portfolio of NIFTY 100 Index companies in Python (Financial Engineering) *(April'21-May'21)*

- Plotted the daily stock price and returns of **NIFTY 100** Companies stocks of **last 5 years** and presented their **Time series characteristics**.
- Plotted **histogram** and **Q-Q plot** to check the distribution of the returns. Constructed a Markowitz portfolio and plotted the **Efficient Frontier, Security Market Line (SML)** and demonstrated **Underpriced** and **Overpriced** Stocks.
- Implemented virtual portfolio on **Moneybhai** platform of 15 stocks having **higher Sharpe** ratio for a month.

Analysis of Factors affecting Car price (Statistical Modelling for Business Analytics) *(Aug'21-Aug'21)*

- Carried out **multivariate statistical analysis** to study which variables are significant in predicting the price of a car.
- Calculated **measure of fit, correlation matrix**, performed **Breusch-Pegan test** for **heteroscedasticity**, checked for **multicollinearity** using **VIF(Variance Inflation Factor)**.
- Feature elimination is done using **RFE(Recursive Feature Elimination)** based on p-value and finalized model with **R^2 0.918** and **Adjusted R^2 0.915**

Sentiment Analysis of Airline Tweets (Applied Machine Learning) *(April'21-May'21)*

- Classified sentiments based on review text, pre-processing by stemming, stop-words removal and Lemmatization.
- Applied **Random Forest Classification** and **Gradient Boosting.**
- Used **Accuracy, Precision, Recall** and **F1-score** as metrics for comparison. Best model was **Random Forest** with TF-IDF having **accuracy 0.76**.

Credit Card Risk Fraud Detection (Data Mining and Knowledge Discovery) *(Oct'20 – Dec'20)*

- Dataset is PCA transformed and highly imbalance contain 284,807 transactions with 35 features out of 492 frauds.
- Performed **Explanatory Data Analysis(EDA)**, **Data Preprocessing** and **Data visualization**. Class imbalanced data handled by **Under Sampling** and **Over Sampling**. Applied **Logistic Regression, Random Forest** and **Decision Tree** with various sampling techniques.
- Used **Accuracy, Recall and F1-score** as metrics for comparison. Best model was **Random Forest with Over Sampling**.

INTERNSHIP

Data Science Intern at Harvesting Farmer Network *(May'21-July'21)*

Objective: Product Recommender System Based on Customer Purchase History

- Carried out **Exploratory Data Analysis(EDA), Data Preparation**. Data manipulation is done using **Pandas** and **Numpy**.
- Python and Machine learning module **Turi-create** is used for constructing a model. Two types of model are used for this task: **Popularity Model** and **Collaborative Filtering Model**.
- **Collaborative Filtering** Model uses **Cosine Similarity** and **Pearson Similarity**.
- **RMSE**, **Recall**, **Precision, F1-score** was used for model evaluation and model selection.

COURSEWORK AND SKILLS

Relevant Courses	**Applied Machine Learning** | **Probability & Statistics** | **Statistical Modelling for Business Analytics** | **Financial Engineering** | **Data Mining & Knowledge Discovery** | **Operation Research for Management | Advanced Corporate Finance** |
Skills	**Python** (Numpy, Pandas, Sci-kit Learn, Seaborn, Matplotlib, Statmodels) | **SQL** | **Machine Learning** | **MS Office** | **Natural Language Processing** | **Tableau** | **R**

POSITION OF RESPONSIBILTY

- **Alumni Relations Coordinator**, IME Department, IIT Kanpur (Organized webinars and Alumni meet)

ACHIEVEMENT

- Silver Badge for **SQL** on **HackerRank**.

LIECENSES AND CERTIFICATION

- The Complete SQL Bootcamp 2021: Go from Zero to Hero at **UDEMY**.
- Python for Finance: Investment Fundamentals and Data analytics at **UDEMY.**