PUSHKAR AWASTHI

M.Tech (Industrial and Management Engineering)

<u>GitHub:</u> 📿 | <u>LinkedIn</u>: in

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YEAR	DEGREE	INSTITUTE	CPI/%
2021-2023	M.Tech. (Industrial & Management Engineering)	Indian Institute of Technology, Kanpur	8.15*
2017-21	B.Tech. (Textile Technology)	U.P. Textile Technology Institute, Kanpur	8.31
2017	Class XII (CBSE)	Delhi Public School Kalyanpur,kanpur	80.60%
2014	Class X (CBSE)	Delhi Public School Kalyanpur,kanpur	8.8 CGPA

INTERNSHIP

(May'22 – July'22)

(Mar'22 – Apr'22)

(Sept'21 – Oct'21)

*unto 2nd sem

Axtria-Ingenious Insight

Data Quality Visualization on Power BI & Microstrategy

- Analyzed Business Requirement Document of Novartis Brand to understand the objective of project and to drive the sales performance and execution.
- Dataset Included Data quality data of various Metrics, Geography, Field Forces, brands & their competitors having weekly/monthly sales, % variation b/w sales, Hierarchy vise sales etc.
- Transformed the excel sheets by pivoting down the tables so as to visualize them accordingly on Power BI & Microstrategy.
- Created KPI's and different Visualizations in Power BI desktop and similarly dossiers in Microstrategy to get insights, which would help Novartis & Axtria in making data driven decisions

ACADEMIC PROJECTS

Sentiment Analysis on IMDB Movie Review (Applied Machine Learning)

- The IMDB dataset consists of 50,000 Movie reviews that have been pre-labeled with "good" and "negative" sentiment class labels.
- Classified sentiment based on review text, performed data cleaning and pre-processing by Stop-word removal, tokenization, Stemming.
- Executed Feature Extraction Techniques Bag of Words, TF-IDF, and Word2Vec.
- Applied Models Multinomial Naïve Bayes, Logistic Regression, and Support Vector Machine.
- Used Accuracy, Precision, Recall and F1-Score as evaluation metrics for comparing models.

Analysis of the Factors Affecting Sales Price of Houses in King County, USA (Statistical Modelling for Business Analytics) (Aug'21 – Sept'21)

- Carried out Exploratory Data Analysis & Data Visualization.
- Start building model using uni-variate Linear Regression model, and then using multi-variate Linear Regression model.
- Calculated measure of fit, correlation matrix, performed Breusch-Pegan test for heteroskedasticity, used VIF (Variance Inflation factor) to check multicollinearity and looked for omitted variable bias by performing backward elimination and eliminating insignificant variables.

Telecom Customer Churn Prediction (Statistical Modelling for Business Analytics)

- Dataset contained 7043 rows (customers) and 21 features such as "customer account", "customer demographic info", "paperless etc.
- Performed EDA, applied SMOTE to balance the data and RFE (Recursive Feature Elimination) to select the 15 significant features.
- Logit and Probit models were used for classifying the churn class; features were dropped based on p-value and VIF.
- Logit showed better results as the accuracy was about 79%, precision of 73.8% and a recall of 62.4%, AUC of ROC curve was 0.83.

Analysis of Hurdles in Evolution of EV's in India (Marketing Research) (Feb'22 – Apr'22)

- Conducted Survey on EV's in India to to know peoples perspectives for EV's and to know their requirement or expectations from electric vehicles.
- Data collected using online survey, focus groups and conducting 12+ personal Interview with people from different states.
- Designed cross-sectional case study dynamic survey form using Scaling techniques, pretesting to control internal & external validity.
- Conducted exploratory descriptive research & analysis data using t -test in SPSS with 95% confidence level to test the hypothesis.

SELF PROJECTS

Air-Passengers-Forecasting-using-Time-series

- Predicted Air Passengers travel for next 10 years analyzing previous month wise data from 1949 to 1960 using time series techniques
- Decomposed Time series into its component to analyze Trend, Seasonality, and noise
- Checked Stationarity using Rolling Statistics test & ADCF-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, ARIMA, time series models applied and used RSS as evaluation metric

Image Classification using CNN

- Loaded cifar10 Dataset consisting of 60000 32 X 32 color images in 10 classes from tensor flow library having various objects like ship, frog, cat, horse etc.
- Splitted the data in training and testing with 50000 & 10000 samples respectively and the Normalized our data.
- Builded ANN with 5 epochs having relu and softmax as an activation function and sparse categorical cross entropy as loss function giving accuracy at around 49%.
- Modeled CNN having 5 epochs and using convolution & max pooling layer with relu and softmax as an activation function giving accuracy around 70% and at the end of 15 epochs as 83% which is a significant improvement over ANN.

Credit Risk and Fraud detection

- Dataset is highly imbalance contain 284,807 transactions with 35 features out of 492 are Fraud's
- Perform Explanatory Data Analysis (EDA), Data Preprocessing and Data visualization, Class imbalanced data handled by SMOTE and Used Accuracy Precision, Recall and F1-Score as metrics to compare model.
- Applied Logistic Regression, Random Forest and Decision tree with sampling Best Model is Random Forest.

COURSEWORK AND SKILLS			
Academic	Applied Machine Learning Data Mining and Knowledge Discovery Probability and Statistics Introduction to Computing (Java)		
Courses	Operation Research for Management Statistical Modelling For Business Analytics Marketing Research Business Management using cloud		
Online	Python and Data Handling Libraries Fully Diploma 2021 Power BI Zero to Hero Statistics for Data Science and Business Analysis Excel		
Courses	Skills for Business: essentials		
Technical	Machine Learning Statistical Analysis Natural Language Processing Python (Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn) Java		
Skills	HTML Power BI Microstrategy MS Excel SQL		
Soft Skills	Critical Thinking, Problem Solving, Teamwork, Effective Communication, Adaptability		
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