College code-4212
421221243004-PHASE1

WEBSITE TRAFFIC ANANALYSIS

DATA ANALYTICS WITH COGNOS- GROUP2

Problem statement:

Develop a comprehensive website traffic analysis system that gathers, processes, and presents data to provide insights into user behavior, source of traffic, popular content, and conversion rates, with the goal of optimizing the website's performance and user experience."

Objectives:

The goal of this project is to create a model that can forecast client churn with accuracy. Using data analytics to forecast customer churn and identify variables affecting customer retention might help firms retain more customers.

To begin with, one needs to build a comprehensive picture of the customers and their interactions across a variety of channels, such as store/branch visits, product purchase histories, customer service calls, Web-based transactions, and social media interactions, to name a few.

Therefore, by dealing with churn, these companies may not only maintain their market position but also develop and prosper. The bigger the network size, the cheaper the cost of commencement,

and the higher the profit. As a result, the company's key focusforsuccess

is reducing client attrition and implementing effective retention strategy.

DESIGN THINKING:

As we discussed earlier we have to find out the solution for how to solve this problem here are the detailed step by step process for designing of the model using Data Analysis.

Step1: Clearly define the problem

Recognize what your particular definition of "churn" is. Is it when a consumer no longer uses your product, when they terminate their subscription, or another event?

Step2: Data collection

Use appropriate data as per the problem defined in the problem statement.

Step3: Preparing of the data

Data is gathered, and thenThe data should be cleaned and pre-processed to deal with missing values, outliers, and inconsistencies. To provide

the model useful information, add new features or change current ones. For the purposes of training and assessing your model, divide the dataset into training, validation, and test sets.

Step4: Exploratory data analysis(EDA)

Data visualization To investigate data distributions, relationships, and trends, use charts and graphs. Keep an eye out for patterns or abnormalities that might point to possible churn causes. Create theories on the characteristics that could serve as excellent churn predictors.

STEP5:Feature Selection:

Choose relevant features: To choose the most informative features for your model, use statistical tests, feature importance ratings, or domain expertise.

Step6:Model Selection

Select the proper algorithms: Think about various models, such as

neural networks, random forests, or gradient boosting.

Basic models: As you study increasingly complicated models, start with a very simple model as a starting point.

Step:7 Model Training and Validation

Train the models: To train the models you've selected, use the training dataset. On the validation dataset, evaluate the model performance using the proper metrics (e.g., accuracy, precision, recall, and F1-score).

Step8: Model evaluation

The model had been evaluated through the different types of accuracy models like confusion matrix etc…

Step9:Reporting and Visualization

To inform stakeholders about churn projections and insights, provide periodical reports or dashboards.

Visualization: To communicate findings and trends to non-technical audiences, use graphs and charts.

Step10: Business Action

Work with business teams to develop and put into action measures to stop churn, such as focused marketing campaigns, individualized offers, or customer support programs, based on the predictions made by the model.

Step 11: Iterate

Improve model performance and business outcomes by iterating on the entire process continuously and adding fresh data and user feedback.