**Ed-Tech Business Intelligence**

**Aim:**

To understand the concepts of business intelligence insights, by analysing various successful conversions.

Data cleaning and EDA through python and identifying the KBRs and KPIs for this specific business problem.

**Business Problem:**

An ed tech company manages to sell a lot of online courses across different countries and thousands of users.

These courses are from different sectors starting from Business category, there are courses from Finance, Entrepreneurship, Communication, Management, Sales, Strategy, Operations, Project Management, Business Law, Data & Analytics, Home Business, Human Resources and Industry each having multiple courses under its domain.

Our goal is to provide a complete analysis about their sales distribution, consumer demands, revenue generated etc, with proper data visuals and DTC dashboard at the end in Tableau.

**Learning Outcomes:**

1. Understand the KBRs and KPIs of an ed-tech business
2. Cleaning data and feature selection.
3. Learn EDA through Python, to find all the relevant metrics that would help us to track our KPIs.
4. Dynamic Charts creation and Dashboarding through Tableau using various metrics to provide a clear analysis of the company’s performance.

**Initial Skill Requirement:**

Proficiency in Python libraries: pandas, numpy, matplotlib and seaborn.

Along with that Tableau dynamic charts creation and Dashboarding skills.

**Data Dictionary:**

|  |  |
| --- | --- |
| **Variables** | **Description** |
| id | The course ID of that particular course. |
| title | Shows the unique names of the courses available under the development category on ed-tech platform. |
| url | Gives the URL of the course. |
| is\_paid | Returns a boolean value displaying true if the course is paid and false if otherwise. |
| num\_subscribers | Shows the number of people who have subscribed that course. |
| avg\_rating | Shows the average rating of the course. |
| avg rating recent | Reflects the recent changes in the average rating. |
| num\_reviews | Gives us an idea related to the number of ratings that a course has received. |
| num\_ published\_lectures | Shows the number of lectures the course offers. |
| num\_ published\_ practice\_tests | Gives an idea of the number of practice tests that a course offers. |
| created | The time of creation of the course. |
| published\_time | Time of publishing the course. |
| discounted\_ price\_amount | The discounted price which a certain course is being offered at. |
| discounted\_ price\_currency | The currency corresponding to the discounted price which a certain course is being offered at. |
| price\_ detail\_amount | The original price of a particular course. |
| price\_ detail\_currency | The currency corresponding to the price detail amount for a course. |
| **rating** | Shows course rating. |
| **num\_reviews** | Number of reviews a course received. |
| **is\_wishlisted** | Shows if course is wishlisted. |

**Road map:**

Phase: 1

Initially we need to have a good understanding of the project requirement and domain knowledge about how web traffic data is processed, and the terms used for tracking its several metrices.

1. Step 1: Explanation of all the metrices and dimensions recorded in this dataset.
2. Step 2: What are business insights and how are they best detected.
3. Step 3: Understanding the data with the help of excel and then loading it into python for further analysis
4. Creation of KBRs and KPIs and maintaining proper notes for it.
5. Step 4: Required Installations – Python, MS Excel, Tableau

Phase: 2

After planning and studying our business requirement, it’s time to perform further data cleaning and EDA in Python using various Python libraries.

1. Step 1: Loading the excel file data into a python pandas data frame, understanding the types of files and their connecting function in Python
2. Step 2: Studying the data with python data frame features, checking for the exact numbers of null values in all the columns.
3. Step 3: Clean the data using drop and other functions that helps in proper feature selection.
4. Step 4: Plotting various features in a graph to see the correlation of metrics to our goals (KPIs).
5. Step 5: Finalizing all our findings and converting the updated data frame into excel sheet to be further used in Tableau

Phase 3:

In this phase our focus would be to visualize the data through Tableau as, dashboards are the end product that needs to be delivered to the clients as the most part of our analytics services. All the insights related to this ed-tech business needs to be presented in the best way possible.

1. Step 1: Connect the data in Tableau.
2. Step 2: Create the required charts, according to the features and metrics selected during EDA.
3. Step 3: Add dynamic features to the charts to make it more insightful and user friendly with the help of parameters and calculated fields.
4. Step 4: Design a Dashboard that perfectly presents all the business insights with the dynamic chats created above in step 3.