

Diwali Sales Analysis

The Diwali Sales Analysis project aims to explore and analyse a dataset containing information about sales during the Diwali festival. The dataset, named "Diwali_Sales_Data.csv," is loaded into a Pandas DataFrame for thorough examination and visualization. The project is implemented using Python with key libraries such as NumPy, Pandas, Matplotlib, and Seaborn.

Importing Data:

The initial phase involves importing the necessary libraries and loading the Diwali sales dataset using Google Colab. The dataset comprises 11,251 rows and 15 columns. It provides information about various aspects of sales transactions during the Diwali festival.

Data Cleaning:

Data cleaning is a crucial step to ensure accurate analysis. In this project, initial data inspection is conducted using `df.info()`. Columns labelled "Status" and "unnamed1" are removed as they are not relevant to the analysis. Null values are identified and subsequently removed from the dataset. Additionally, the data type of the "Amount" column is converted to integer type.

Data Analysis:

The primary focus of the project is on analysing and visualizing different aspects of Diwali sales using various plots and charts.

Gender-wise Analysis:

A count plot is utilized to visualize the distribution of orders based on gender.

Sales amounts are aggregated and presented using a bar plot to highlight gender-wise sales performance.

Age Group and Gender Analysis:

A clustered column chart is created to showcase the distribution of orders across different age groups and genders.

Top 10 States by Sales Amount:

The project identifies and visualizes the top 10 states with the highest sales amounts, offering insights into regional sales performance during Diwali.

Marital Status Analysis:

A count plot displays the number of orders categorized by marital status, providing insights into the purchasing behaviour of individuals with different marital statuses.

Top 5 Occupations by Sales Amount:

The analysis identifies and visualizes the top 5 occupations based on their contribution to sales amounts during Diwali.

Product Category Analysis:

A count plot illustrates the distribution of orders across different product categories.

Overall, the Diwali Sales Analysis project aims to uncover patterns, trends, and insights from the sales data, providing valuable information for businesses and stakeholders involved in the Diwali sales market. The visualizations enhance the interpretability of the data, enabling effective decision-making based on the observed trends.