



CAPSTONE PROJECT

Problem Statement:

You are working in an organization and are given the responsibility to create an advanced sales analytics solution designed to optimize sales performance by providing actionable insights derived from comprehensive data analysis.

Guidelines:

1. Open a google colab colob.
2. Rename the as " Coffee shop Sales".
3. Import the dataset

About Dataset

The Coffee shop Data dataset contains 10,000 rows of data representing sales transactions in a Coffee shop

Column	Description
Transaction ID	A unique identifier for each transaction. Always present and unique.
Item	The name of the item purchased. May contain missing or invalid values
Quantity	The quantity of the item purchased. May contain missing or invalid values.
Price Per Unit	The price of a single unit of the item. May contain missing or invalid values.
Total Amount	The total amount spent on the transaction. Calculated as Quantity * Price Per Unit.
Payment Method	The method of payment used. May contain missing or invalid values
Location	The location where the transaction occurred. May contain missing or invalid values.



Transaction Date	The date of the transaction. May contain missing or incorrect values.
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1. Import the data into your colob
2. Display the first five records
3. Display the last five records
4. Display the shape & size of the Dataset
5. Find the unique items in the dataset?
6. Handle the missing values in the dataset?
7. Calculate the total sales?
8. Calculate the average unit price?
9. Total Sales per item?
10. Average unit price per item?
11. Number of transactions per item?
12. Display top 5 items with total sales?
13. Display the 2nd highest sales item?
14. Save the google colob with you name?
15. Count the number of transactions for each Payment Method?
16. Calculate the total Sales for each Payment Method?
17. Count the number of transactions for each Payment Method?
18. Calculate the total sales for each payment Method?
19. Which item has highest sales and lowest sales?
20. Create a Stacked Bar chart which show the breakdown of sales by item within each payment method?
21. Create the bar chart compare the total sales for different items?
22. Create a pie chart of sales by each item?
23. Create a line chart by total sales over transaction date?
24. By using the graphs and Correlation matrix give the suggestions to improve the Coffee shop sales