

HAMZA ASLAM

Genztechs

Data Science Internship
Program Assignment 6

Task 1:

Tool installation and Tutorial

<https://powerbi.microsoft.com/en-us/downloads/>
Power Bi Tutorial

https://youtu.be/kSmcQiO7z4Y?si=BmdmeYRmAJkC_mXw

<https://youtu.be/3u7MQz1EyPY?si=URjB4H8Pwt54QxjM>

Task 2:

Connecting to Data Sources

- I. How can you import data from a CSV file into Power BI?
- II. Explain the process of connecting Power BI to a website as a data source, specifically using an Excel file hosted on the website.
- III. What are the steps to connect Power BI to Google Analytics and retrieve data from it?

Task 3:

Data Transformation and Modeling

Perform the following functions on a specific column:
calculate the average, find the maximum value, and count
the number of unique values.

262.20K

Max_Value

24.13K

Average_value

557

Unique_Count

Add a new column to the dataset that calculates the total sales by multiplying the quantity and price columns.

16.89M

TotalSales

Sort the data based on the length of a specific column and display the first three letters of that column. Concatenate these letters with another column and display the result.

4013

Sum of NameLength

FirstThreeLetter	NewColumn
S	3-Canada
9	3-France
8	3-Germany
7	3-Mexico
5	3-United States of America
4	4-Canada
3	

Task 4:

Creating Visualizations

Explore the Format tab in Power BI and change the format of a specific column to currency. Set the decimal places to two and the symbol to dollar.

\$127.93M

Sum of Gross Sales

Format a column as a whole percentage and adjust the display options to show it as a rounded value.

921M%

Sum of Discounts

Change the format of a date column to display only the month and year.

MonthYear



July 1905

Task 5:

Extracting Specific Information

Extract information from a text column to create a new column that contains only the email domain (e.g., extracting "example.com" from "ahmadhassan@example.com").

EmailDomain

barrett.info
barry.biz
beard.info
benson.org
benton-finley.com
bernard.com
blevins-chapman.net
boone-simmons.org

Extract the day of the week from a date column and create a new column showing the extracted information.

Sunday
First DayName

Task 6:

Merging and Appending Data

Merge two columns together to create a new column that combines the first and last name.

FullName



Yvonne Farmer

Wayne Simpson

Virginia Dudley

Vernon Kane

Tracey Mata

Tom Trujillo

Task 7:

Data Pivoting

Perform a pivot operation on a data table to transform the rows into columns based on a specific column's values.

8756

Sum of Midmarket

29K

Sum of Government

10K

Sum of Small Business

9505

Sum of Enterprise

Task 8:

Conditional Columns

Create a conditional column that assigns a specific value based on a condition. For example, assign "High" if the sales amount is greater than 1000, otherwise assign "Low".

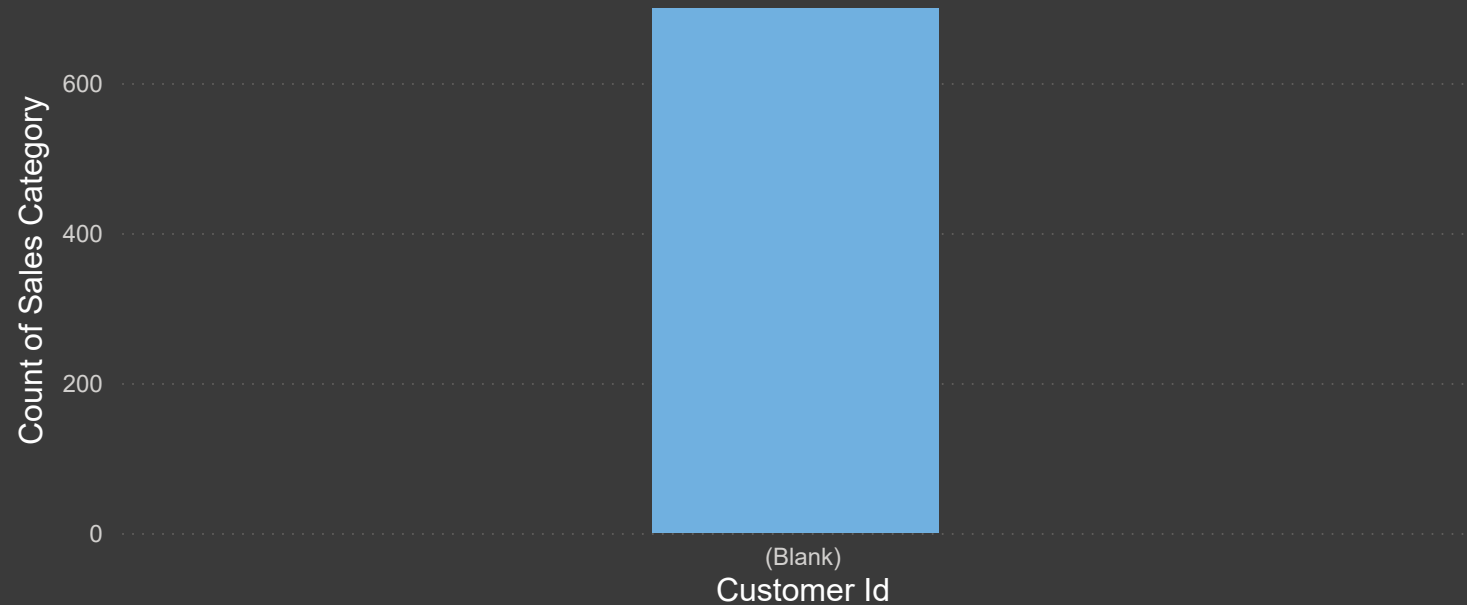
High
First Sales Category

Task 9:

Creating Relationships

Create a one-to-many relationship between the "Orders" table and the "Customers" table based on the "CustomerID" column.

Relationship Count of Sales Category by Customer Id



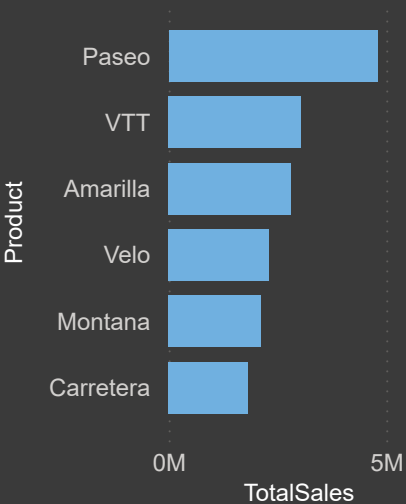
Task 10:

Creating Measures (Visualization)

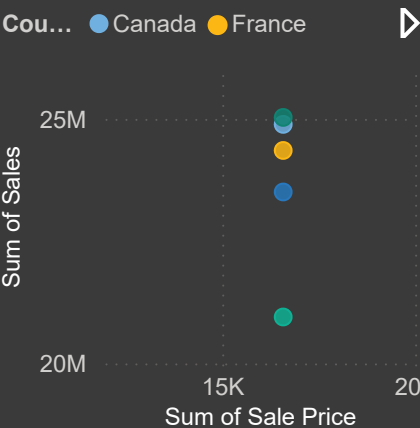
- I. Create a bar chart to represent the total sales by product category. What category has the highest sales?
- II. Build a line chart to display the trend of monthly revenue over a specific time period. Identify any significant fluctuations or patterns in the data.
- III. Create a scatter plot to visualize the relationship between customer age and their purchase amount. Is there any correlation between these variables?
- IV. Design a stacked column chart to compare the sales performance of different regions. Which region has the highest overall sales?
- V. Construct a pie chart to represent the distribution of product sales across different departments. Which department contributes the most to the total sales?
- VI. Utilize a tree map visualization to display the market share of different product brands. Identify the brand with the largest market share.
- VII. Develop a funnel chart to visualize the conversion rates at different stages of a sales process. Identify any significant drop-offs or bottlenecks in the conversion funnel.
- VIII. Create a map visualization to display the geographical distribution of sales. Which region or country has the highest sales volume?
- IX. Design a gauge chart to represent the progress towards a sales target. How close are you to achieving the target?
- X. Construct a combination chart with both a line and a bar chart to compare actual sales with the target sales for each month. Identify any deviations from the target

Task 10: Creating Measures (Visualization)

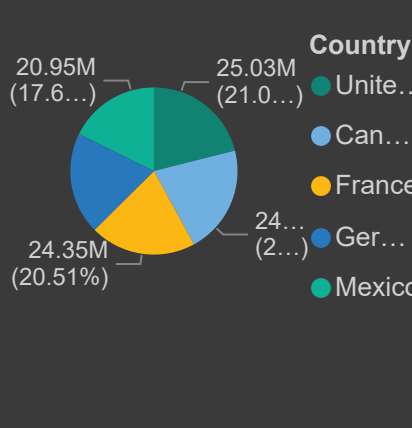
TotalSales by Product



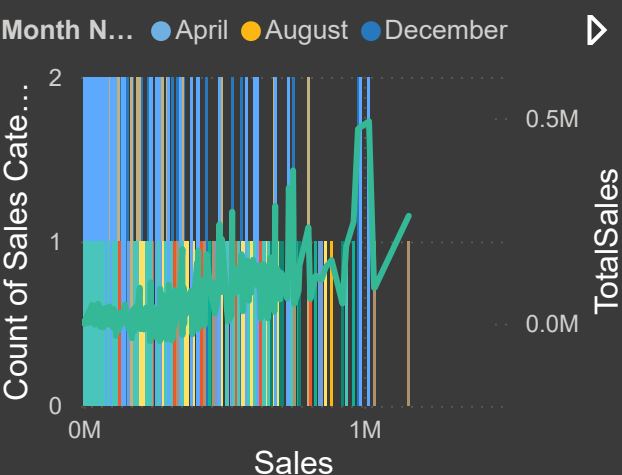
Sum of Sale Price and Sum of Sales by Customer Id and Country



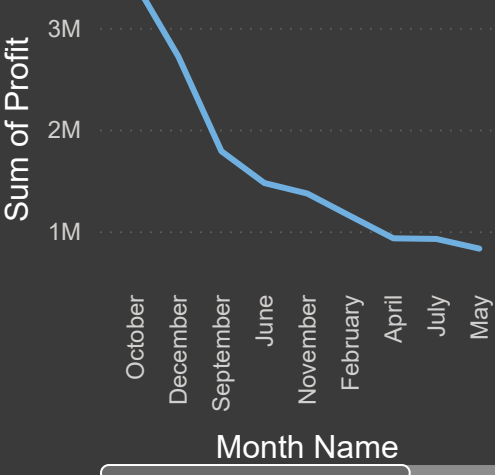
Sum of Sales by Country



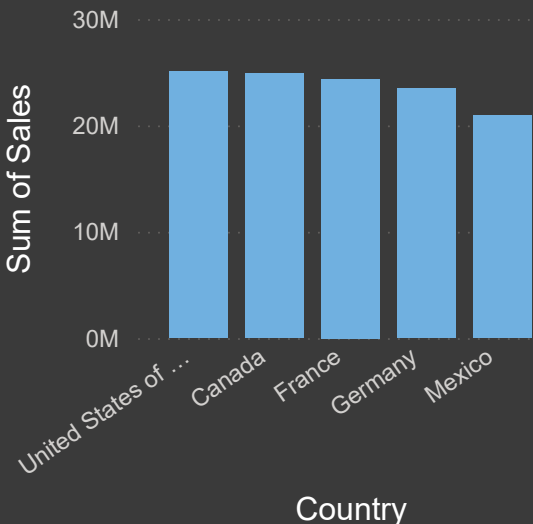
Count of Sales Category and TotalSales by Sales and Month Name



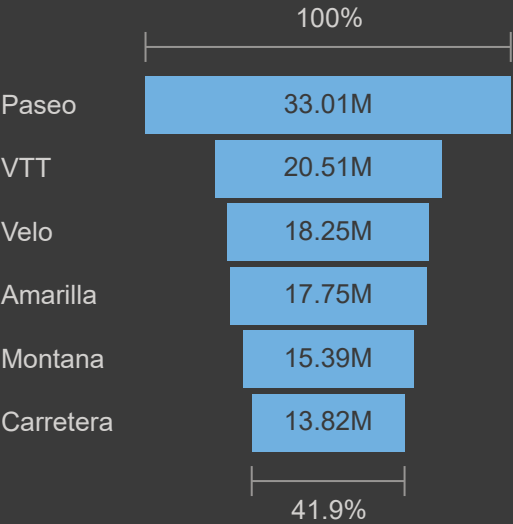
Sum of Profit by Month Name



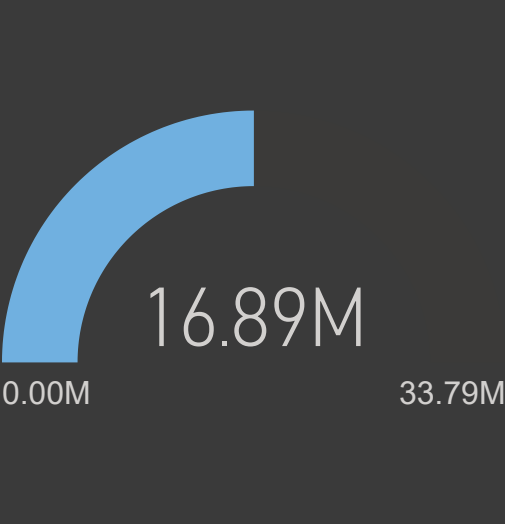
Sum of Sales by Country



Sum of Sales by Product



TotalSales



Country and Sales

