Business Analyst Career Program - Capstone Project

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- Data Exploration
- Statistical Analysis using Excel
- Graphical Analysis using Excel
- Insert the given data into the SQL server
- Import the Data from the SQL Database into PowerBI
- Interactive Dashboard by using visualization tools
- Conclusion and Inferences
- Endnotes



Data Exploration

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1 January

6 June

8 August

10 October

12 Decembe

2 February

2 February

6 June

7 July

8 August

10 October

11 Novembe

11 Novembe

12 December

12 Decembe

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9 Septembe

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7 July

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2014 2014

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Dataset Summary

The dataset consists of financial data

from various Western countries, focusing on sales

and related metrics. Here are the key points:

Structure:

Total Entries: 700

Total Columns: 16

Segments and Products: The dataset includes different market segments and product types.

Financial Metrics: Includes various financial metrics such as gross sales, discounts, net sales, cost of goods sold, and profit.

Carretera

Carretera

Carretera

Carretera

Montana

Montana None

Montana None

Montana None

Montana

Montana None

Montana None

Montana

Montana None

Paseo

Pasen

United States of America Montana

None

None

None

None

None

hannel Partners Canada

hannel Partners German

Enterprise

Enterprise

Midmarket

Small Busines

Mexico

Canada

Mexico

Germany

Canada

▼ Product ▼ Discount Band ▼ Units Sold ▼ Manufacturing Price ▼ Sale Price ▼ Gross Sales ▼ Di 1321

2178

2470

1513

921

2518

1545

2470

958

345

615

292

974

2518

1006

367

883

1143

1725

2152

1817

1513

2146

2665.5

\$20

\$15

\$350 \$5,29,550.0

\$20

\$15

\$125 \$3,33,187,5

\$300

\$125

\$15

\$20

\$15

\$12 \$30,216,0

\$350 \$3,52,100.0

\$300 \$2.36,400.0

\$350 \$6,03,750.0

\$5

\$10

\$10

\$10

\$10

\$10

\$10

\$10

\$10

\$26,420.0

\$32,670.0

\$13,320.0

\$37,050.0

\$13,815.0

\$30,216.0

\$18,540.0

\$37,050.0

\$2,87,400.0

\$15,022.0

\$43,125.0

\$9,225.0

\$5,840.0

\$14,610.0

\$4,404.0

\$6.181.0

\$8,235.0

\$8,001.0

\$10,944.0

\$32,280.0

\$36,340.0

\$10,451.0

\$5,29,550.0

\$0.00

\$0.00

sn nn

\$0.00

\$0.00

\$0.00

\$0.00 \$3.52.100.00 \$2

Temporal Data: The data spans various dates, with specific columns for month and year, indicating potential for time-series analysis.

Sample Data:

The first few rows indicate sales data from different countries for the product "Carretera" with no discounts applied. The manufacturing price, sale price, and other financial metrics are recorded alongside the date of sale.

This dataset provides a comprehensive view of the financial performance across different market segments and countries, suitable for detailed financial analysis and reporting

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Statistical Analysis using Excel

The table provides key descriptive statistics for various financial metrics over 700 data points. It includes:

Units Sold: Mean of 1608.29, range from 200 to 4492.5. Manufacturing Price: Mean of 96.48, range from 3 to 260.

Sale Price: Mean of 118.43, range from 7 to 350.

Gross Sales: Mean of 182,759.43, range from 1799 to 1,207,500.

Discounts: Mean of 13,150.35, range from 0 to 149.677.5.

Sales: Mean of 169,609.07, range from 1655.08 to 1.159.200.

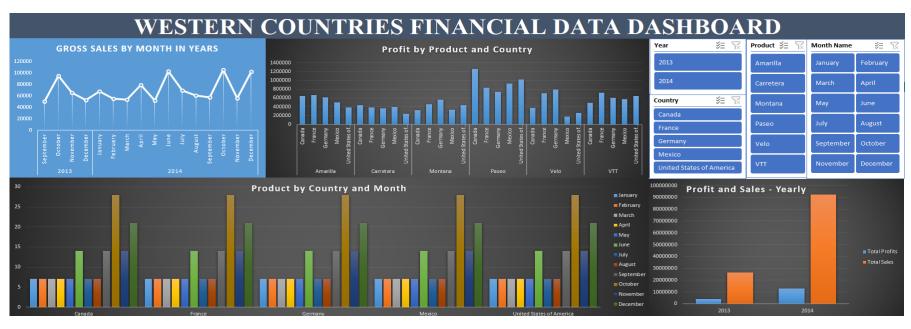
COGS (Cost of Goods Sold): Mean of 145,475.21, range from 918 to 951,523.

Profit: Mean of 24,133.86, range from 40,617 to 262,200.

These statistics include measures such as mean, median, mode, standard deviation, and range, offering a comprehensive overview of the data distribution.



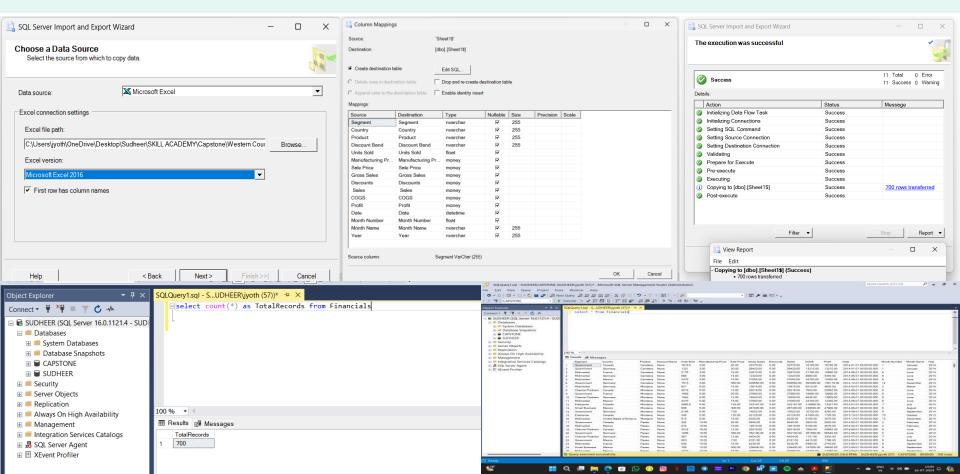
Graphical Analysis using Excel



The image shows a dashboard of financial data for Western countries. The dashboard includes various charts and tables to visualize profit and sales data by product, country, and month. The dashboard shows that sales are highest in Canada and the United States, and the highest-selling product is "Paseo".

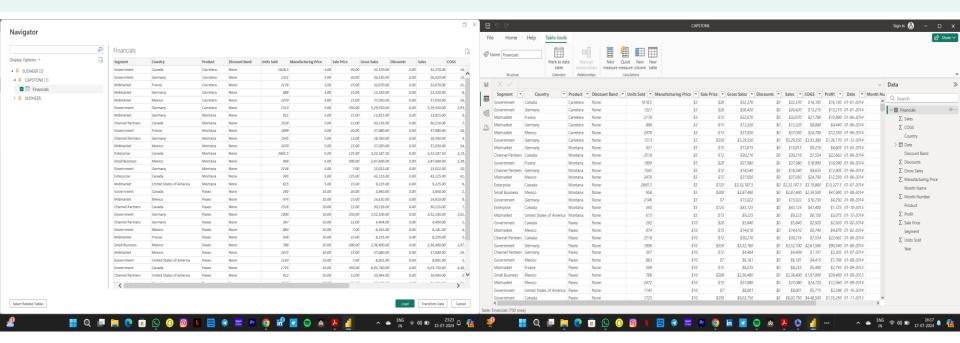
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Insert the given data into the SQL server



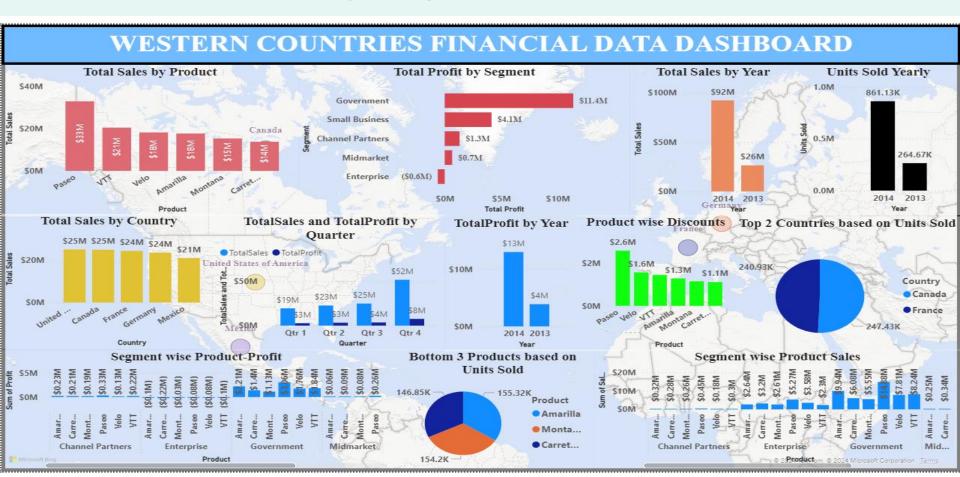
Import the Data from the SQL Database into Power BI

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Connected SQL Server with Power BI and loaded the data into POWER BI, Data Cleansing is performed in Transform Data Tab and made some required adjustments to the data.

Interactive Dashboard by using visualization tools



Conclusion and Inferences

- Seasonal Sales Trends: Sales peak during certain months, indicating seasonal demand.
- Product and Regional Performance: Different products excel in different countries, reflecting localized preferences.
- Yearly Growth: Significant increases in sales and profits from 2013 to 2014 show effective growth strategies.
- Top Products: 'Paseo' and 'Velo' are the best-sellers, while 'Amarilla,' 'Montana,' and 'Carretera' are the least sold.
- Profit by Segment: Government segment is highly profitable, enterprise segment incurs losses.
- Regional Sales: The U.S. leads in sales, followed by Canada and France, indicating strong market presence.
- Quarterly Sales Consistency: Sales and profits are consistent across quarters with slight increases in Q4.
- Discount Strategies: Tailored discounts boost sales for specific products.
- Market Segments: Government and Small Business segments contribute significantly to sales.

Reference Links:-

Github Link for EXCEL and POWER BI files.

THANK YOU!