



- **Capstone Project**

Western Countries

Financial Data

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2025

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- Explored and summarized dataset using Excel.
- Cleaned data and performed statistical analysis.
- Created charts in Excel for initial insights.
- Imported data into SQL Server; created tables.
- Verified data using SQL queries.
- Imported SQL data into Power BI.
- Cleaned data, created measures, and visualized.
- Built an interactive dashboard to answer key business questions.
- Derived insights for sales, profit, segments, and product performance.

Dataset Summary : Western Countries Financial Data

Data exploration & Summarization using Excel

- Size: 700 rows × 16 columns
- Time Frame: Data ranges from Sep 2013 to Dec 2014
- Key Fields: Segment, Country, Product, Sales, Profit, Units Sold, Discounts, COGS, Date
- Segments: Includes 5 types like Government, Midmarket, etc.
- Countries Covered: 5 western countries (e.g., Canada, Germany)
- Products: 6 product categories
- Sales & Profit: Varies widely; highest profit up to 2.6L, losses also appear
- Discount Bands: Four discount levels applied
- Monthly & Yearly Trends: Columns for Month, Year, and Month Number provided



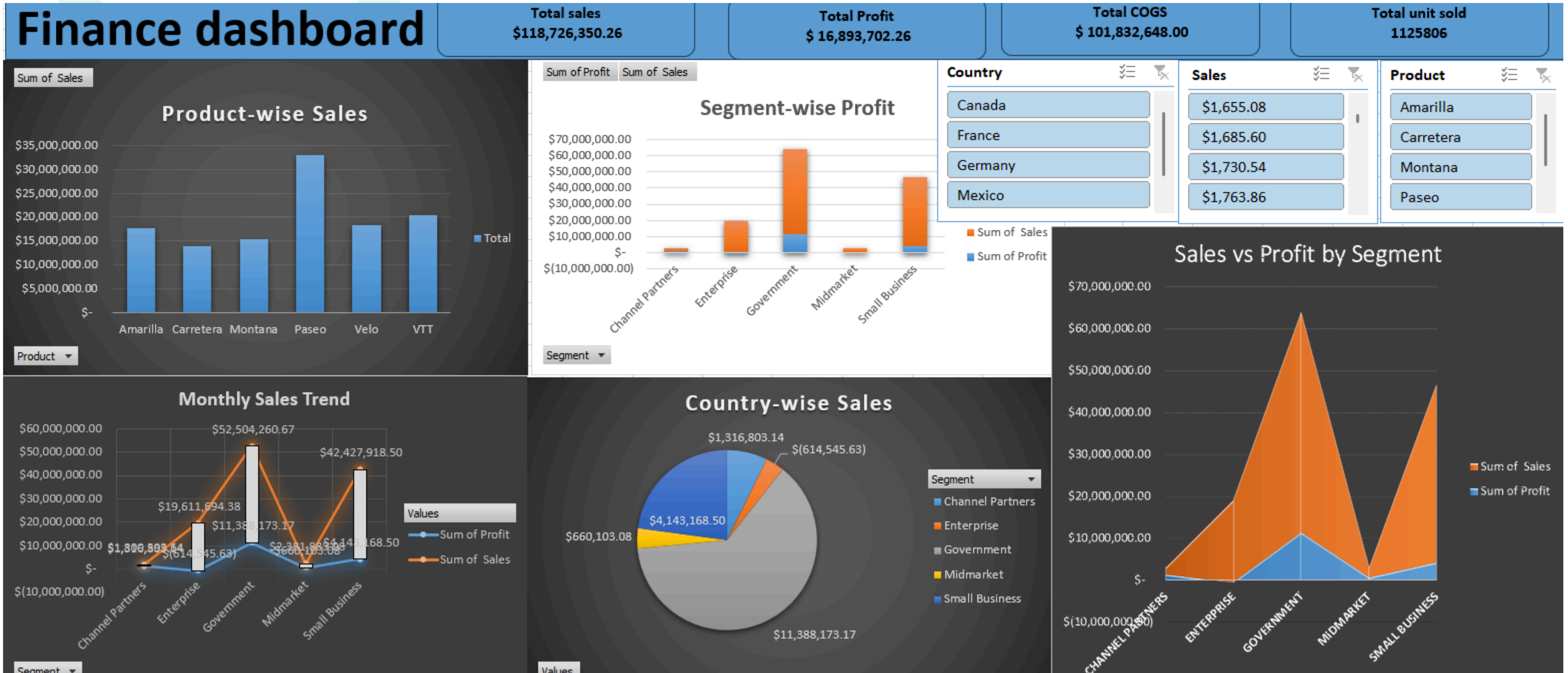
Data Cleaning Steps

- Checked for missing values → No nulls found
- Removed leading space from " Sales" column header
- Verified data types for all columns
- Ensured date formatting was consistent
- No duplicate rows found in the dataset

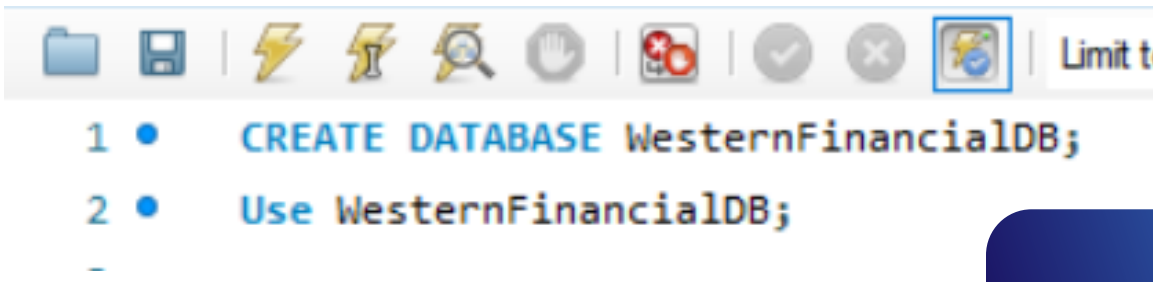
Statistical Analysis using Excel Tools

<i>Statistical Value</i>	sales	<i>Statistical Value</i>	COGS	<i>Statistical Value</i>	Profit	<i>Statistical Value</i>	Unit Sold
Mean	169609.0718	Mean	145475.2114	Mean	24133.86037	Mean	1608.294286
Standard Error	8947.414896	Standard Error	7705.391858	Standard Error	1616.199768	Standard Error	32.78569136
Median	35540.2	Median	22506.25	Median	9242.2	Median	1542.5
Mode	32670	Mode	17430	Mode	0	Mode	727
Standard Deviation	236726.3469	Standard Deviation	203865.5061	Standard Deviation	42760.62656	Standard Deviation	867.4278591
Sample Variance	56039363321	Sample Variance	41561144585	Sample Variance	1828471184	Sample Variance	752431.0907
Kurtosis	2.188633088	Kurtosis	1.608462973	Kurtosis	8.678616216	Kurtosis	-0.315317997
Skewness	1.696295217	Skewness	1.549047562	Skewness	2.712151264	Skewness	0.436153562
Range	1157544.92	Range	949707	Range	302817.5	Range	4292.5
Minimum	1655.08	Minimum	918	Minimum	-40617.5	Minimum	200
Maximum	1159200	Maximum	950625	Maximum	262200	Maximum	4492.5
Sum	118726350.3	Sum	101832648	Sum	16893702.26	Sum	1125806
Count	700	Count	700	Count	700	Count	700

Graphical Analysis and Insights using Excel



Database setup & SQL operation



```
1 • CREATE DATABASE WesternFinancialDB;  
2 • Use WesternFinancialDB;  
-
```

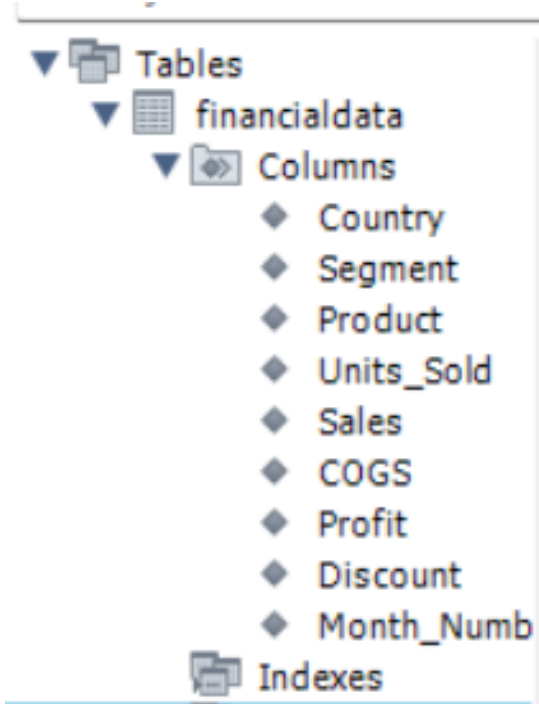
data base creation



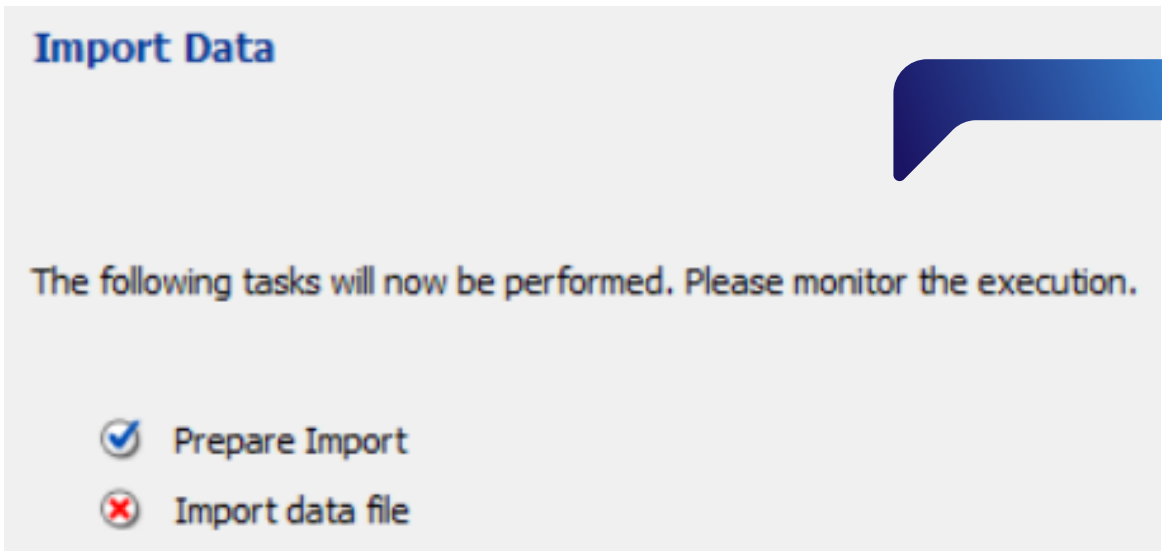
database created



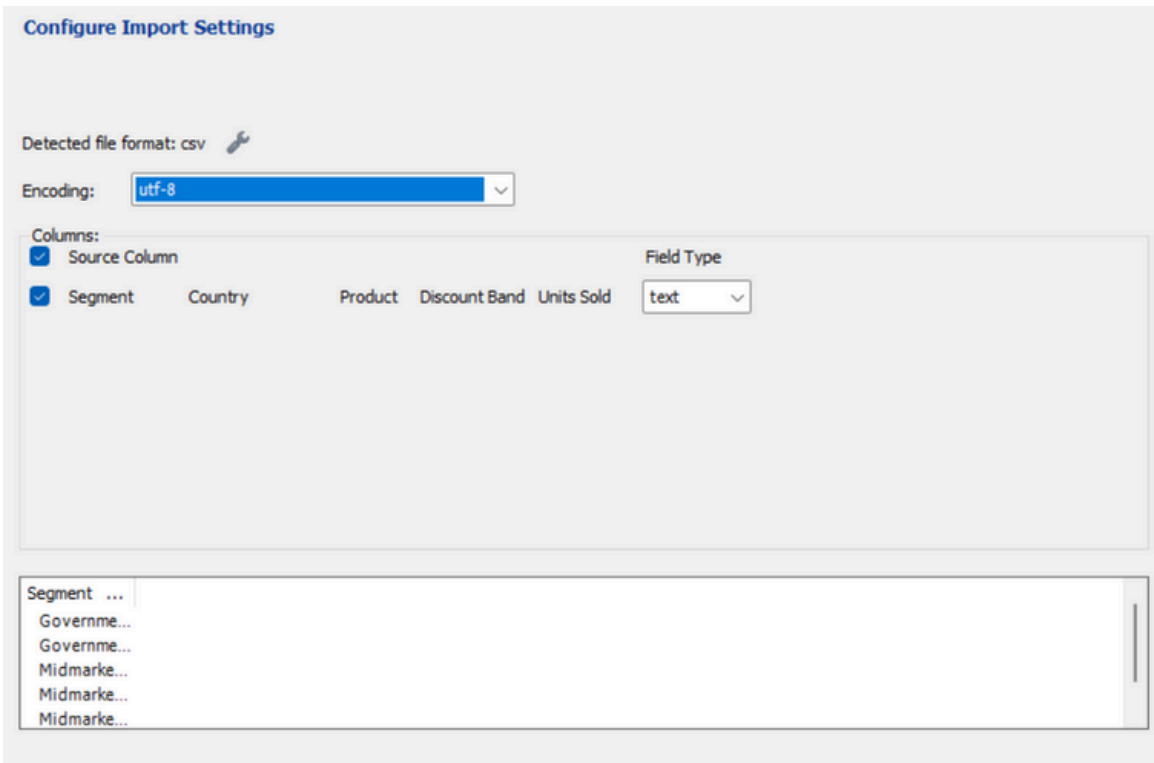
Importing dataset



Showing Database



dataset loaded



datatype Edition

Running Queries in SQL

25 • `SELECT * FROM FinancialData;`

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	Country	Segment	Product	Units_Sold	Sales	COGS	Profit	Discount	Month_Number
▶	United States	Consumer	Laptop	120	150000	90000	60000.5	0.1	5

17 • `SHOW TABLES;`

Result Grid | Filter Rows: |

Tables_in_westernfinancialdb
financialdata

22 • `SELECT COUNT(*) FROM FinancialData;`

Result Grid | Filter Rows: | Export:

	COUNT(*)
1	1

`SELECT * FROM FinancialData
WHERE Country IS NULL OR Segment IS NULL OR Product IS NULL
OR Sales IS NULL OR COGS IS NULL OR Profit IS NULL
OR Units_Sold IS NULL OR Discount IS NULL;`


Result Grid | Filter Rows: | Export: | Wrap Cell Content: |


id	Country	Segment	Product	Units_Sold	Sales	COGS	Profit	Discount	Month_Number
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Data Import to Power BI From SQL


Get data


Most Common

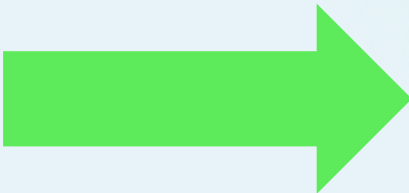
 Excel workbook

 Power BI semantic models

 Dataflows

 SQL Server database

 Azure Analysis Services database



SQL Server database

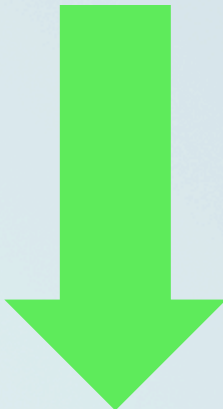
Server ⓘ
portnumber

Database (optional)

Data Connectivity mode ⓘ
☒ Import
☐ DirectQuery

Advanced options

OK Cancel



- ✓

Steps to Import SQL Data into Power BI:

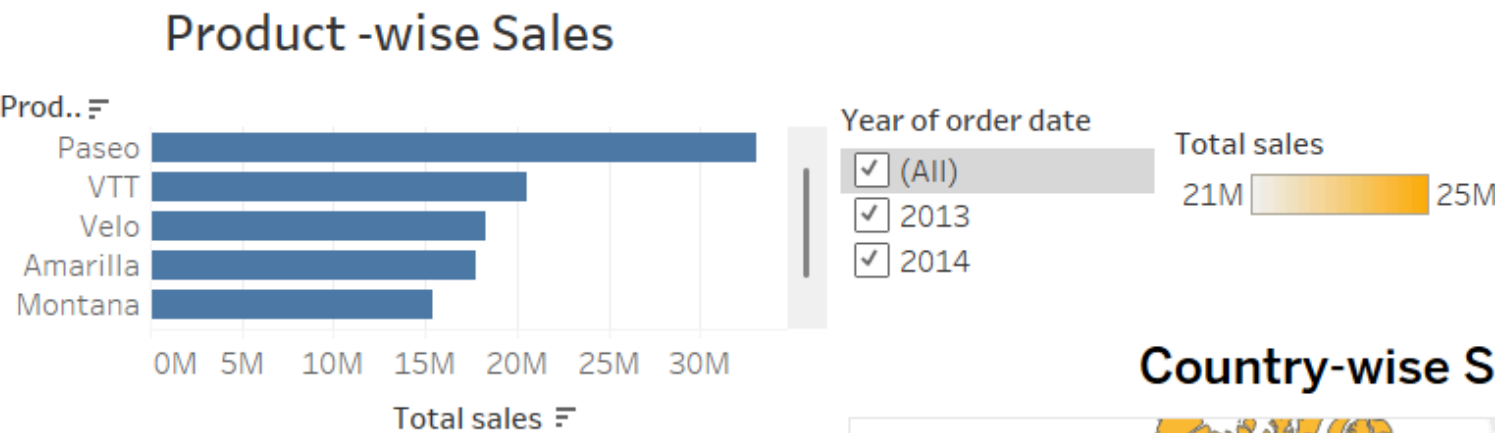
 - 1. Open Power BI Desktop*
 - 2. Click on “Get Data” → Select SQL Server*
 - 3. Enter Server Name and Database Name*
 - 4. Choose Import or DirectQuery mode*
 - 5. Select your table (e.g., FinancialData)*
 - 6. Click Load to bring data into Power BI*

financials

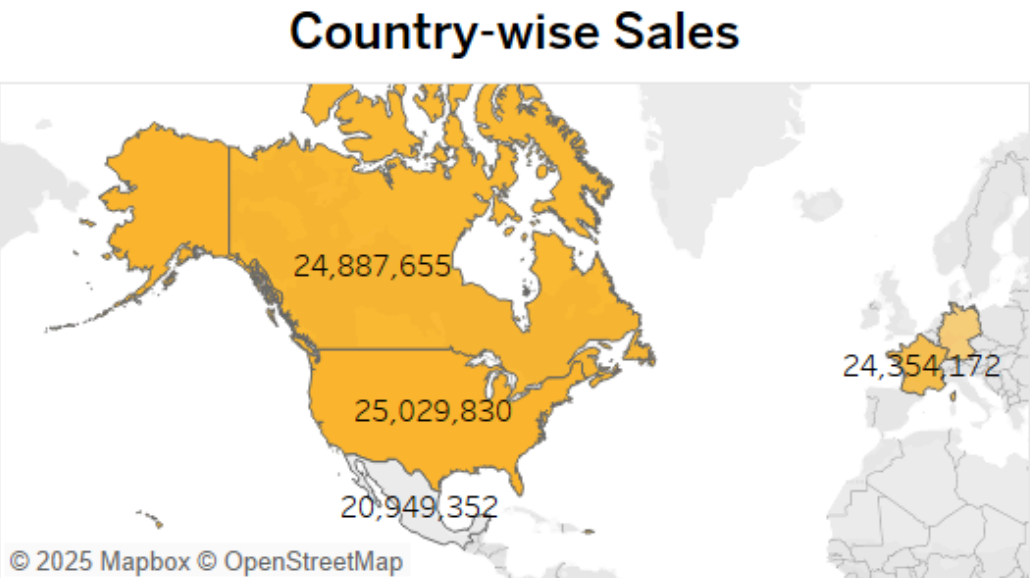
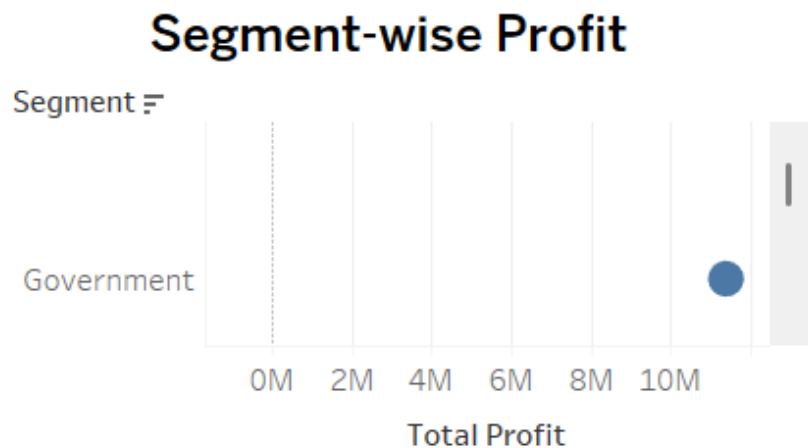
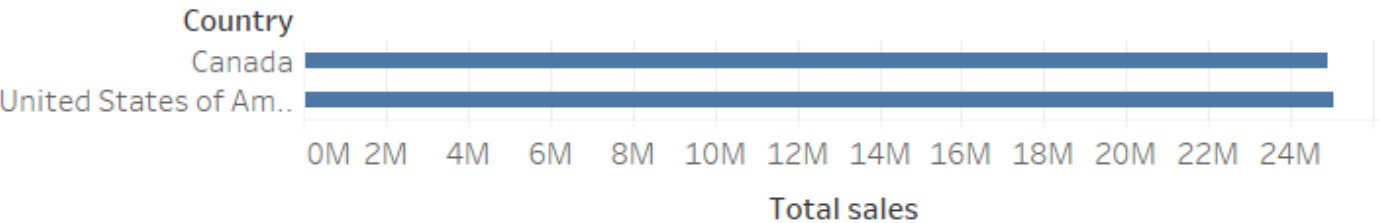
Segment	Country	Product	Discount Band	Un
Government	Canada	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	France	Carretera	None	
Midmarket	Germany	Carretera	None	
Midmarket	Mexico	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	Germany	Montana	None	
Channel Partners	Canada	Montana	None	
Government	France	Montana	None	
Channel Partners	Germany	Montana	None	
Midmarket	Mexico	Montana	None	
Enterprise	Canada	Montana	None	
Small Business	Mexico	Montana	None	
Government	Germany	Montana	None	
Enterprise	Canada	Montana	None	
Midmarket	United States of America	Montana	None	
Government	Canada	Paseo	None	
Midmarket	Mexico	Paseo	None	
Channel Partners	Canada	Paseo	None	
Government	Germany	Paseo	None	
Channel Partners	Germany	Paseo	None	
Government	Mexico	Paseo	None	
Midmarket	France	Paseo	None	

DASHBOARD

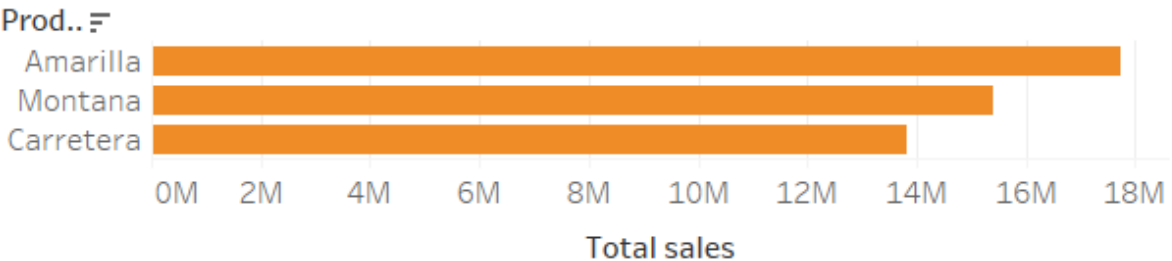
Western Countries Financial Data



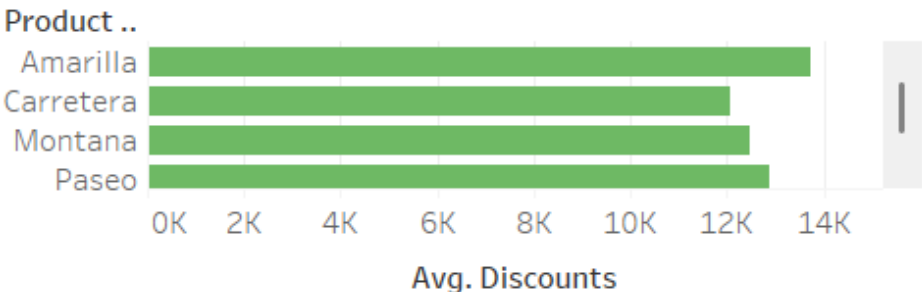
Top 2 Countries By sales



Bottom 3 Products by Sales



Product-wise Discount

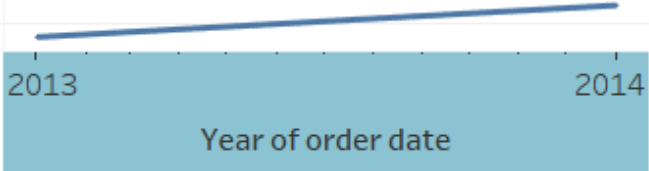


Segment-wise Product Sales

Segment	Product Name					
	Amarilla	Carretera	Montana	Paseo	Velo	VTT
Channel ..	317,643	282,839	261,845	454,514	182,924	
Enterpri..	2,643,608	3,203,708	2,614,844	5,267,860	3,581,238	
Governm..	9,942,899	6,080,944	5,548,936	14,882,231	7,813,422	
Midmark..	248,685	337,305	290,239	907,729	264,498	
Small Bu..	4,594,281	3,910,512	6,674,939	11,498,810	6,407,978	
Total Profit						
	-222,712	3M				



Units Sold Year Over Year



Segment-wise Product-wise Profit

Segment	Product Name					
	Amarilla	Carretera	Montana	Paseo	Velo	VTT
Channel Partn..	230,069	208,406	192,458	331,838	134,267	219,766
Enterprise	-95,153	-222,712	-31,096	-81,740	-84,763	-99,083
Government	2,208,302	1,398,994	1,126,201	3,057,291	1,756,732	1,840,654
Midmarket	63,605	94,105	83,879	258,739	68,653	91,121
Small Business	407,281	348,012	743,314	1,231,310	431,103	982,150

Dashboard Summary – Key Insights

- Paseo is the top-selling product with nearly 30M in sales.
- The Government segment generates the highest profit, exceeding 10M.
- Sales and profit increased from 2013 to 2014, showing year-over-year growth.
- United States and Canada are the top 2 countries by total sales.
- Amarilla, Montana, and Carretera are the bottom 3 products in sales.
- Amarilla and Carretera have the highest average discounts.
- Units sold increased in 2014, reflecting improved performance.
- Enterprise and Government segments show strong sales and profit across most products.



Thank You



• **For Your Attention!**

