

Finance Forecasting using Power BI

Presentation by:

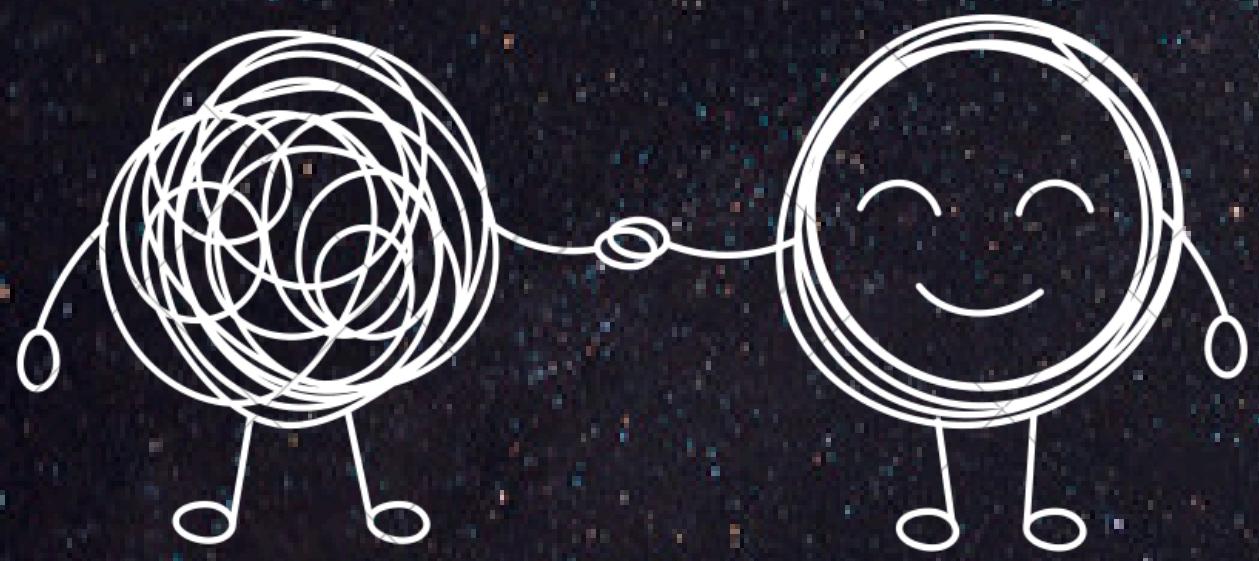
Pratham Shenoy

Under guidance of:



Main Topic

Problem Statement



The project aims to develop a robust finance forecasting model to predict future revenue, expenses, and profit trends. Leveraging historical financial data, the model will help businesses anticipate cash flow, budget accurately, and make strategic financial decisions.

By identifying seasonal patterns and potential risks, it will support proactive financial planning. The ultimate goal is to enhance profitability and ensure sustainable growth through data-driven insights.



What is Power BI?

Power BI is a powerful data visualization and business intelligence tool that allows users to connect to various data sources, clean and transform data, create visually compelling reports, and share insights. Key features include:

1. **Data Connectivity:** Connects to a wide variety of data sources, including Excel, SQL databases, and cloud-based sources like Azure and Salesforce.
2. **Data Transformation:** Power Query Editor provides tools to clean, reshape, and transform data before visualizing it.
3. **DAX (Data Analysis Expressions):** A formula language for creating calculations and aggregations.
4. **Visualization:** A rich library of visuals (e.g., bar charts, line charts, tables, and custom visuals) to help display insights effectively.
5. **Dashboarding and Reporting:** Allows users to create interactive dashboards that can be shared within an organization, with real-time updates and filtering capabilities.



Power BI

Key Components of Power BI

1. Power Query

- Power Query is an ETL (Extract, Transform, Load) tool that enables seamless data ingestion, transformation, and loading into the Power BI environment.
- With Power Query, users can extract data from various sources, clean and reshape it to suit their analytical needs, and load the refined data for further processing.

2. Power Pivot

- Power Pivot is the data modeling engine within Power BI. It allows users to manage and integrate multiple data sources, creating relationships between them for comprehensive analysis.
- By defining relationships between tables, Power Pivot enables complex data models that drive accurate insights and enable sophisticated calculations.



Power BI

Key Components of Power BI

3. Power View

- Power View is Power BI's visualization component, providing access to over 250 visualization types, including line charts, bar charts, pie charts, KPIs, and more.
- These visualizations help users create interactive and compelling data stories, making insights easy to interpret and share with stakeholders.

4. Power BI Service

- Power BI Service is the online platform that facilitates collaboration and sharing of reports and dashboards with clients, colleagues, and end users.
- It supports real-time updates, access control, and seamless communication, allowing teams to work with and share actionable insights in a secure environment.



Power BI

Data Transformation

Overview:

Before visualizing, we transformed the data in Power Query Editor to ensure accuracy and relevance.

Key Transformations:

1. Removed Unwanted Columns

- Removed redundant or duplicate columns to retain only essential data.

2. Changed Data Types

- Adjusted data types to align with analysis requirements (e.g., converting text to dates, numbers, etc.).

3. Split Columns by Delimiter

- Split complex columns using delimiters to improve clarity and enable more detailed analysis.
- and many more...
-

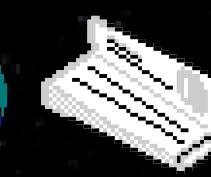
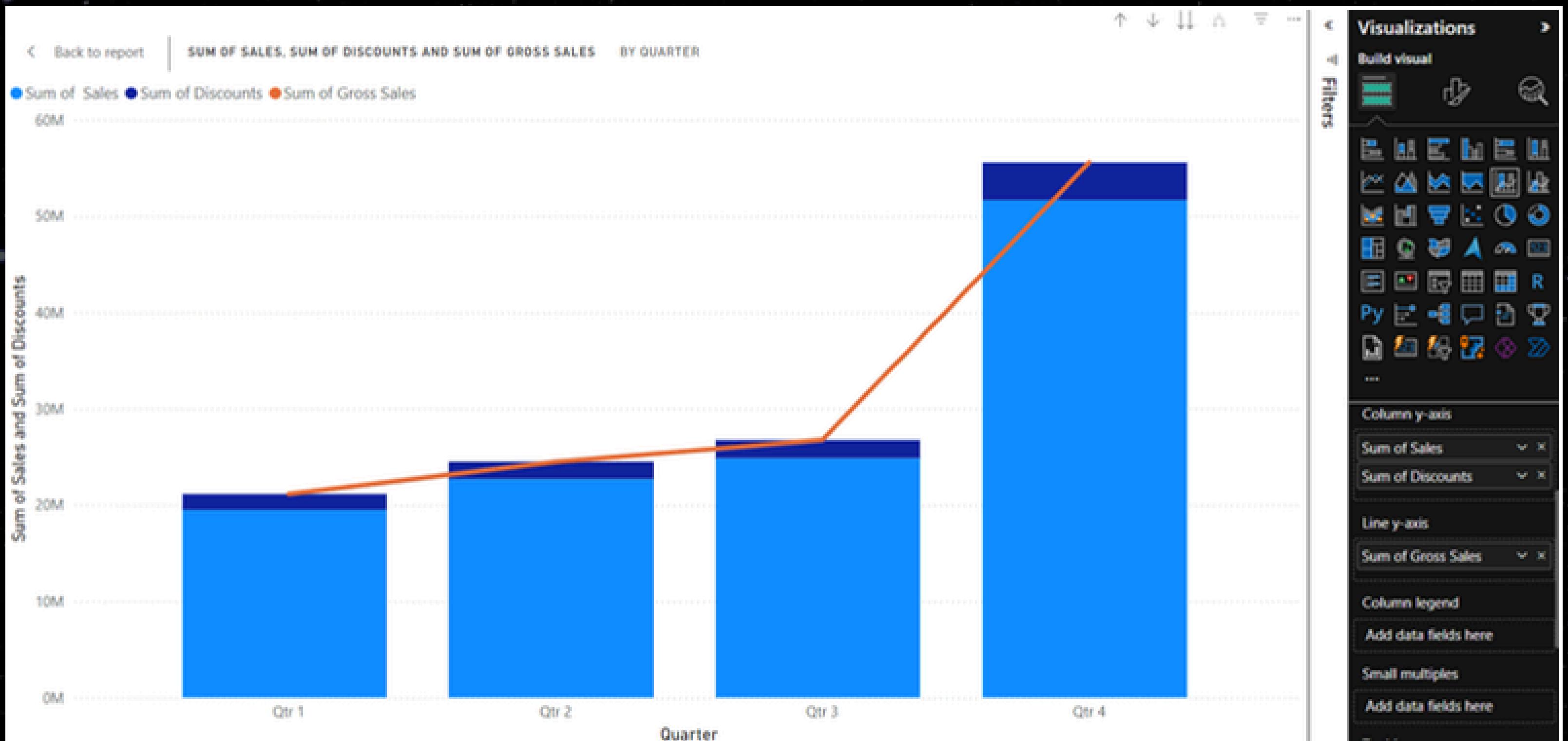
Outcome:

These transformations created a clean, structured dataset ready for powerful visual insights.

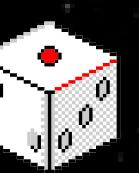
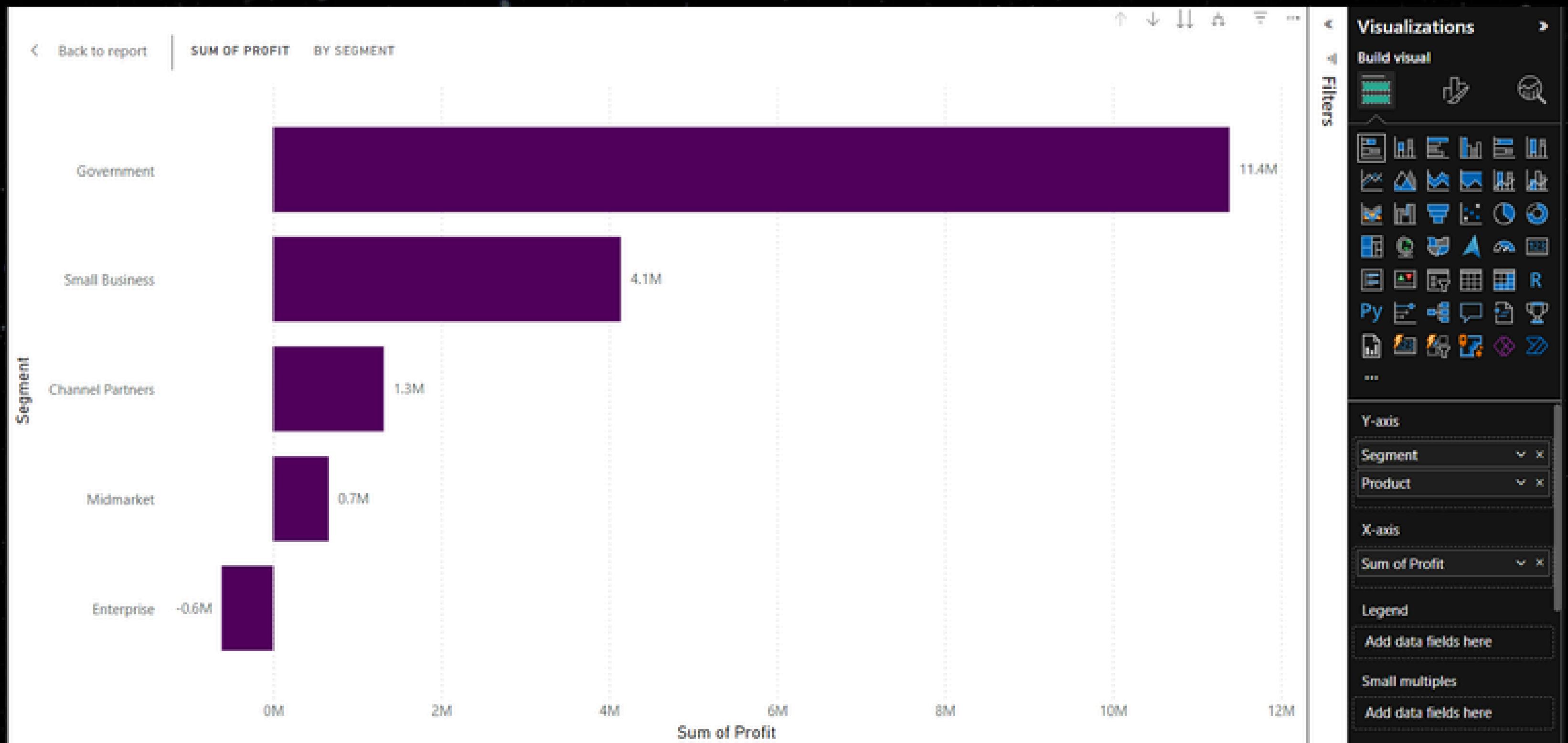


LINE AND STACKED COLUMN CHART

6
Janw

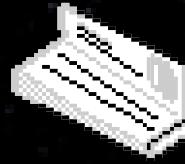


STACKED BAR CHART

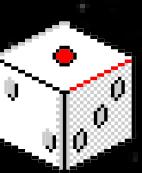
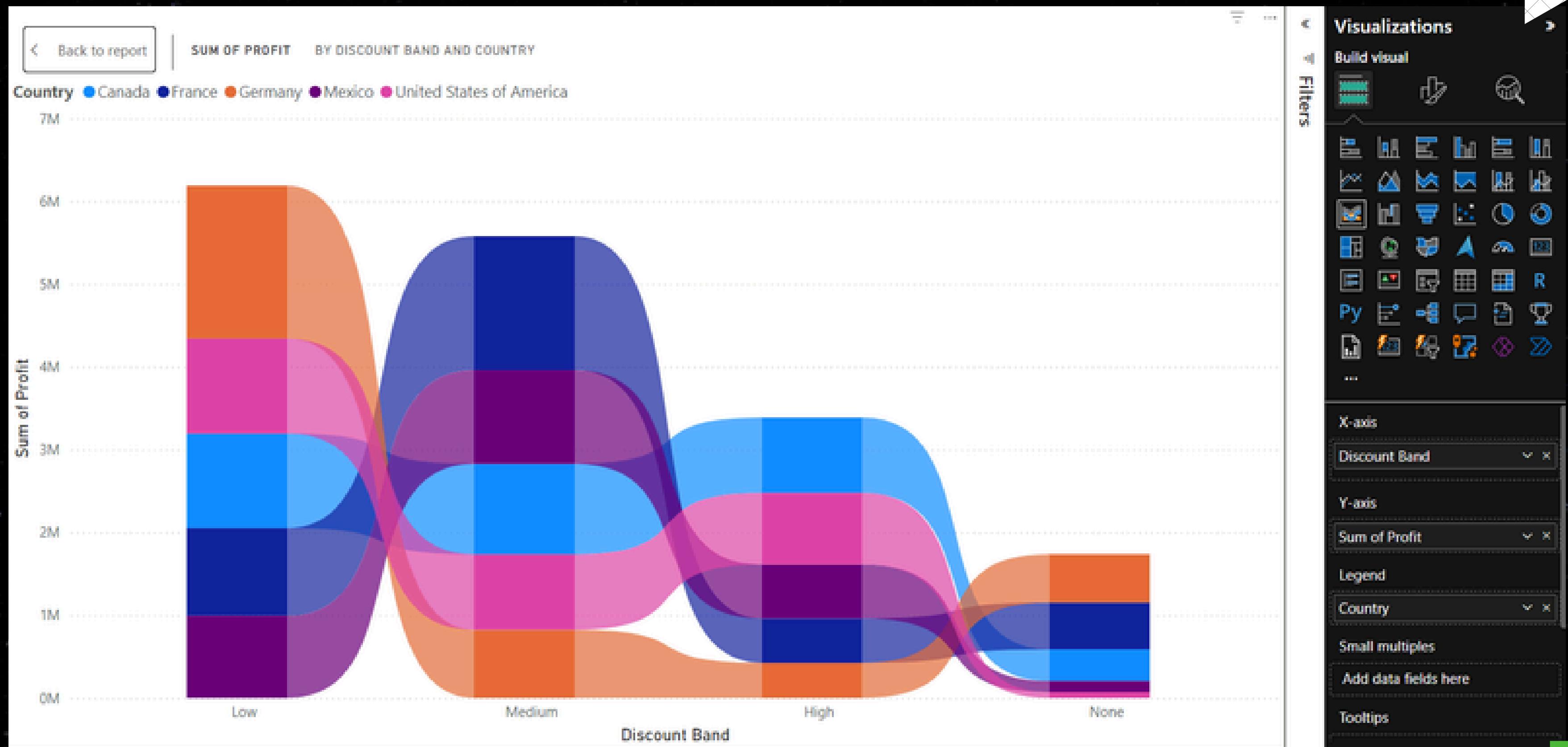


TABLE

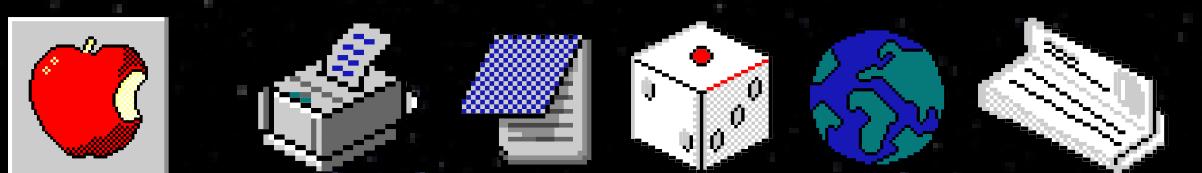
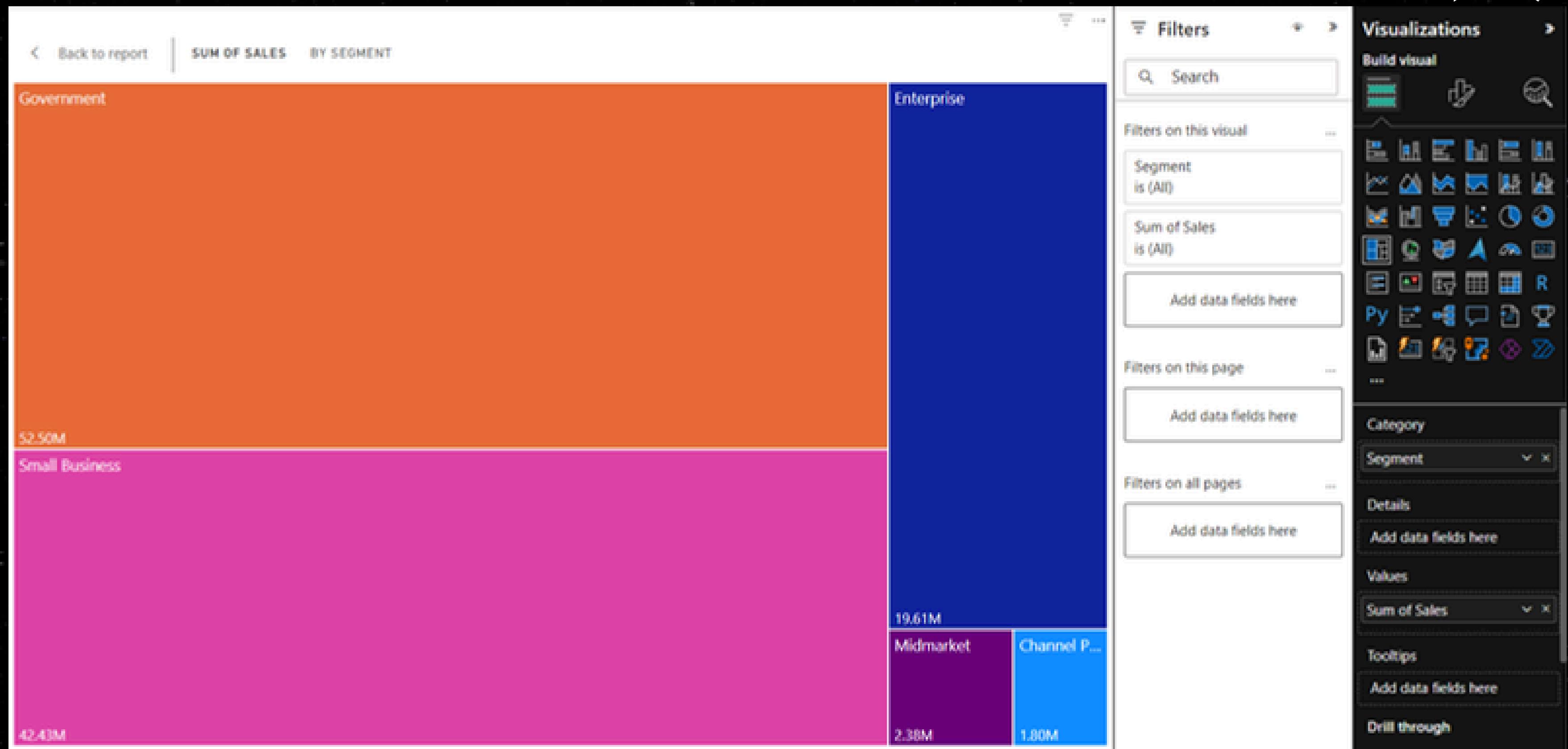
Month	Year	Sum of Sales
January	2014	66,07,761.68
February	2014	72,97,531.39
March	2014	55,86,859.87
April	2014	69,64,775.07
May	2014	62,10,211.06
June	2014	95,18,893.82
July	2014	81,02,920.18
August	2014	58,64,622.42
September	2013	44,84,000.03
September	2014	63,98,697.24
October	2013	92,95,611.10
October	2014	1,23,75,819.92
November	2013	72,67,203.30
November	2014	53,84,214.20
December	2013	53,68,441.08
December	2014	1,19,98,787.90
Total		11,87,26,350.26



RIBBON CHART



Tree Map



KPI

Year, Quarter, Month, Day

- ▼ 2013
- ▼ 2014

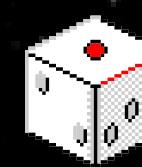
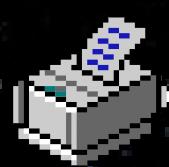
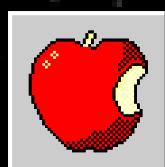
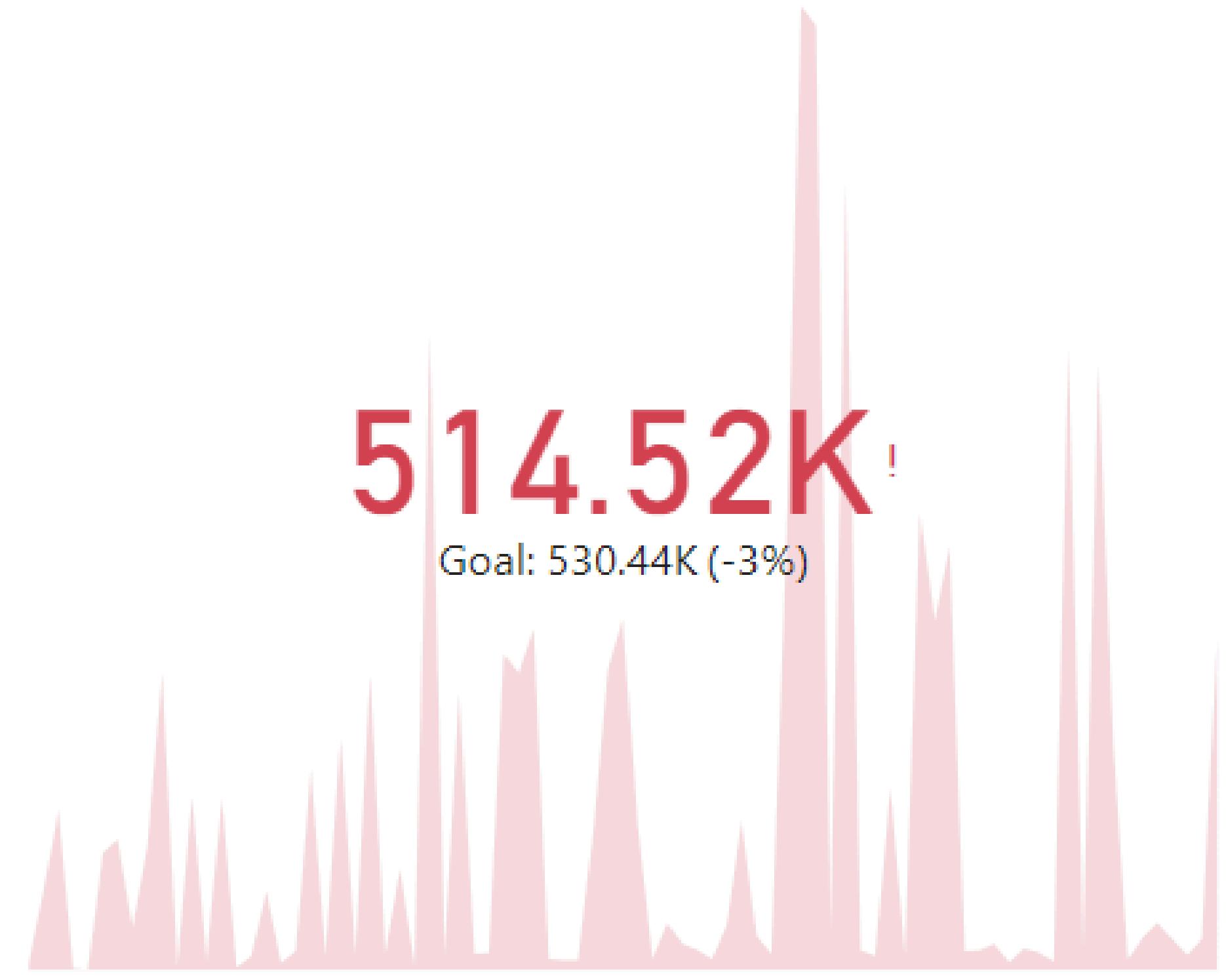
Country

- Canada
- France
- Germany
- Mexico
- United States of America

Sum of Sales and Sum of Gross Sales by Units Sold

514.52K!

Goal: 530.44K (-3%)



KPI

Year, Quarter, Month, Day

- ▼ 2013
- ▼ 2014

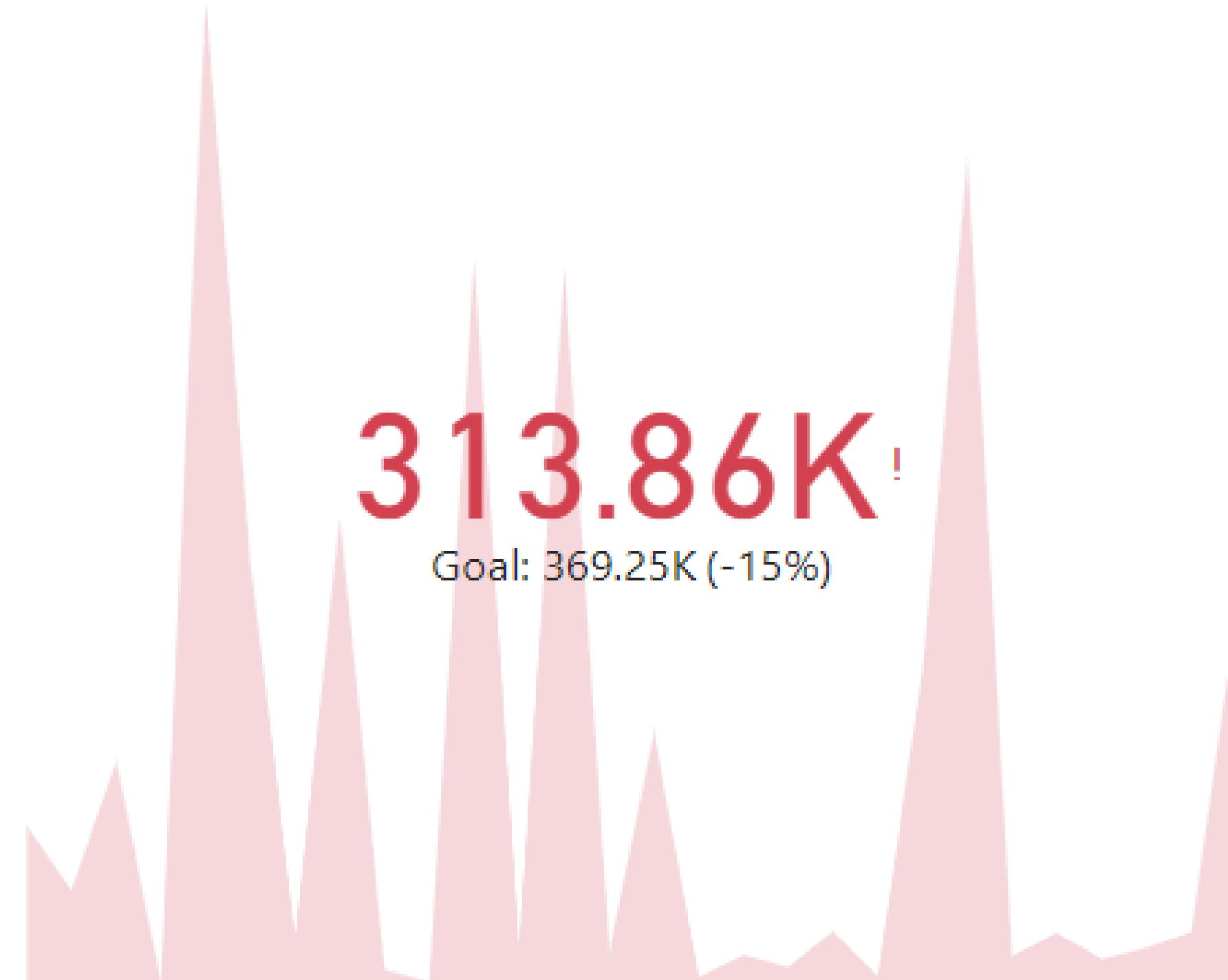
Country

- Canada
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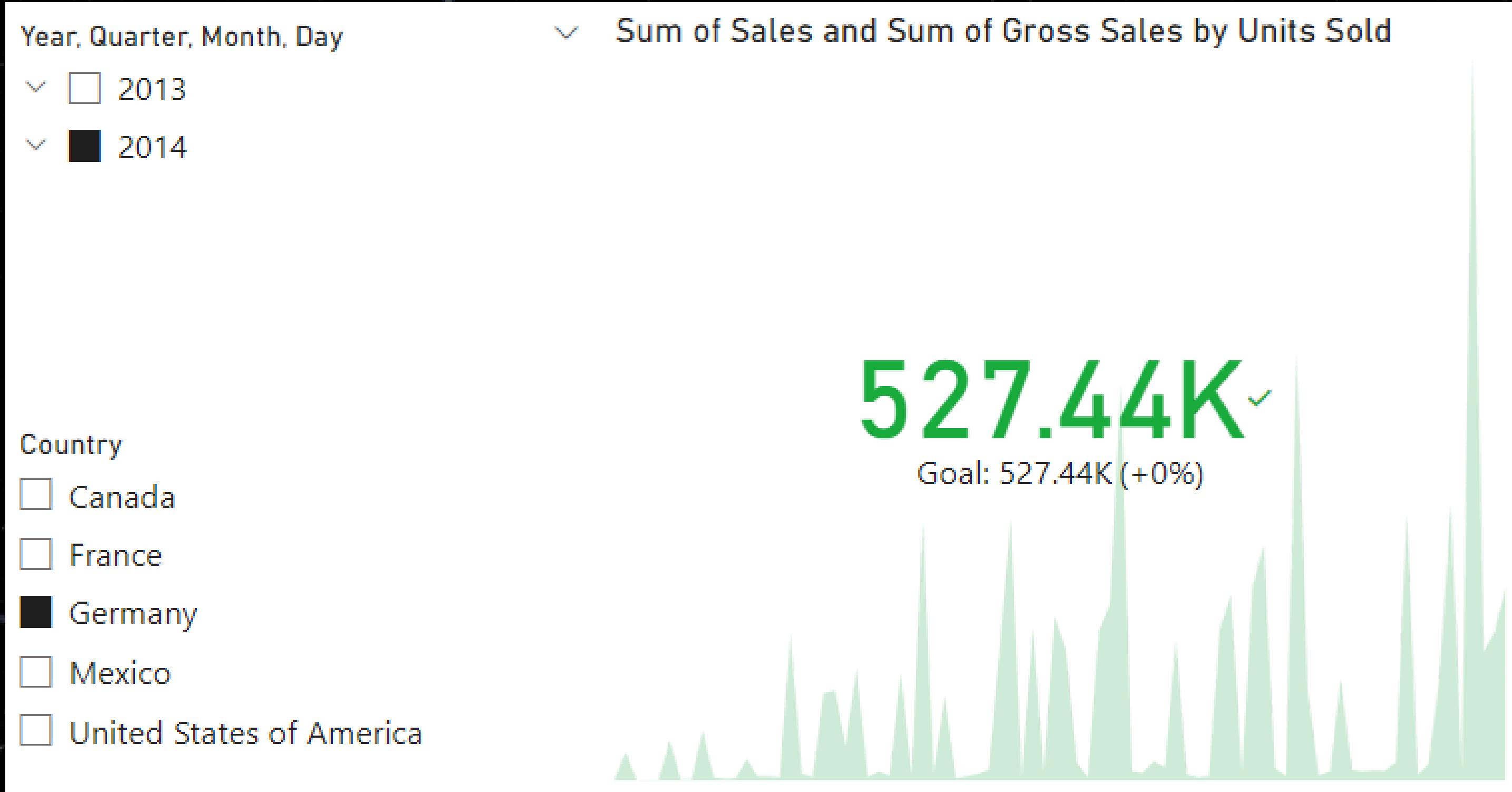
Sum of Sales and Sum of Gross Sales by Units Sold

313.86K!

Goal: 369.25K (-15%)



KPI



CARDS AND SLICER

16.89M

Sum of Profit

127.93M

Sum of Gross Sales

118.73M

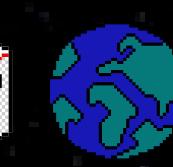
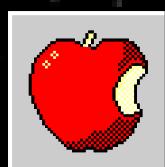
Sum of Sales

Year, Quarter, Month, Day

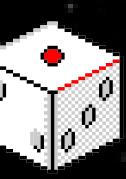
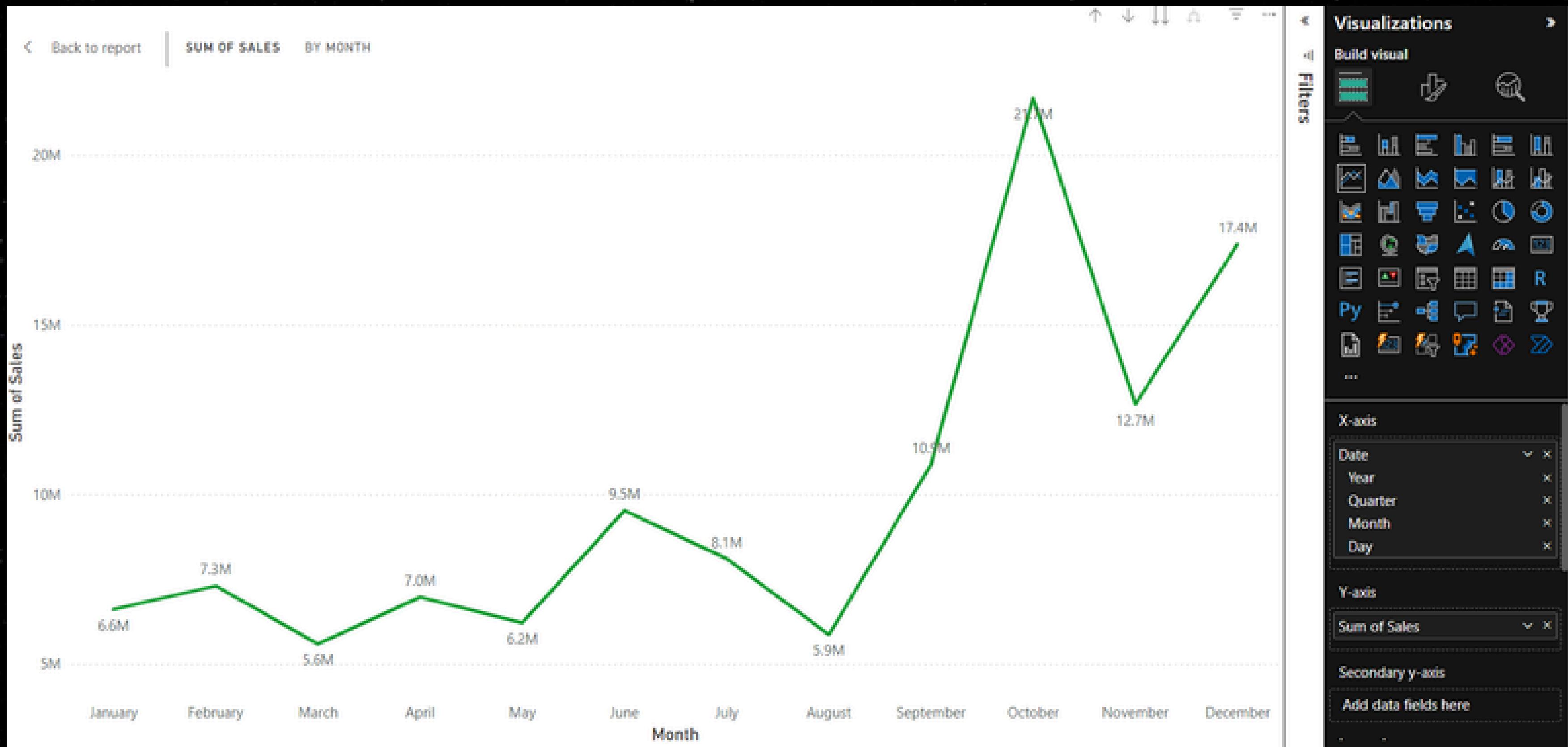
- ▼ 2013
- ▼ 2014

Country

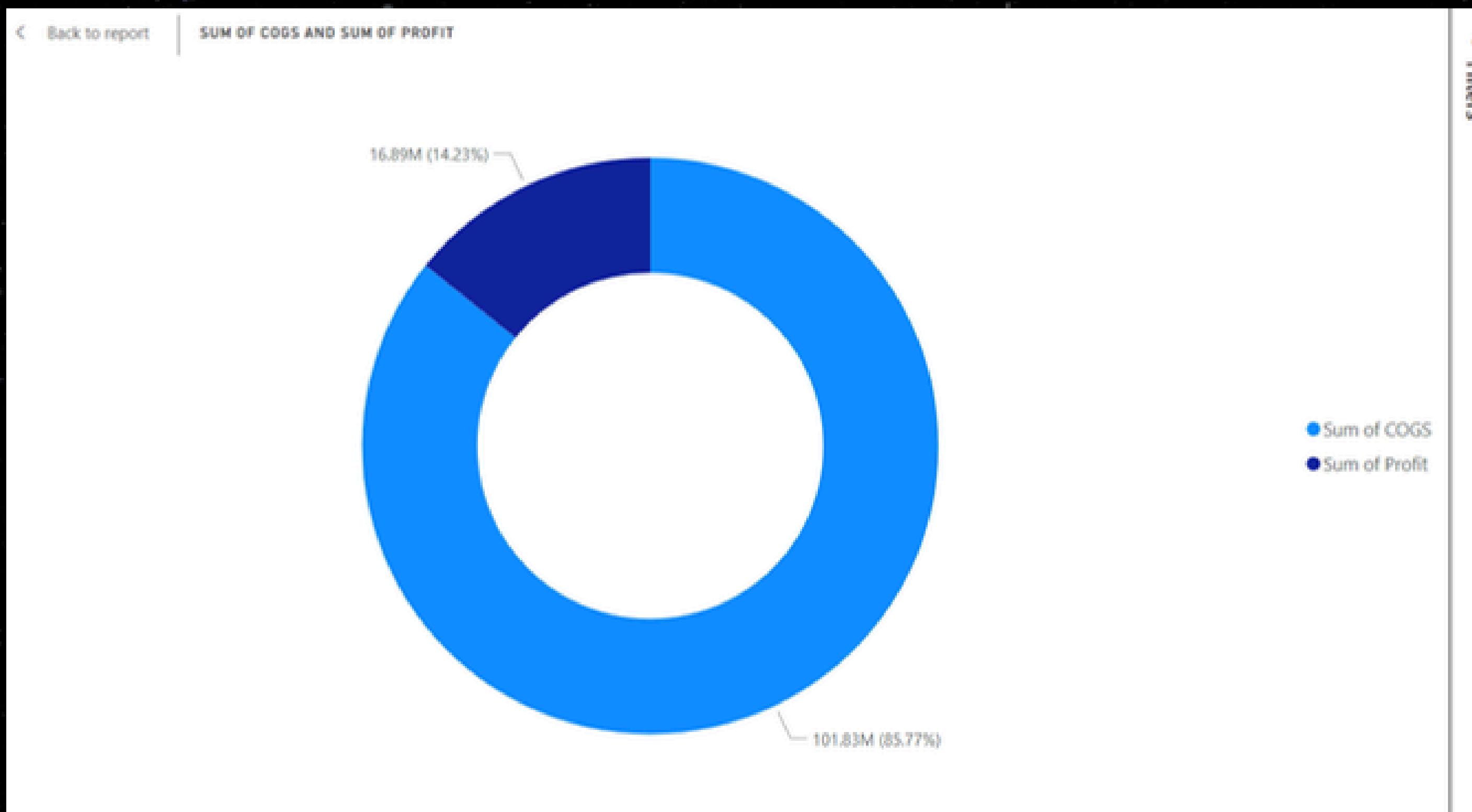
- Canada
- France
- Germany
- Mexico
- United States of America



LINE CHART



DONUT CHART



Build visual

Filters

Py

Legend

Add data fields here

Values

Sum of COGS

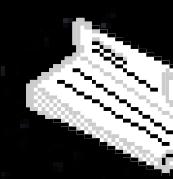
Sum of Profit

Details

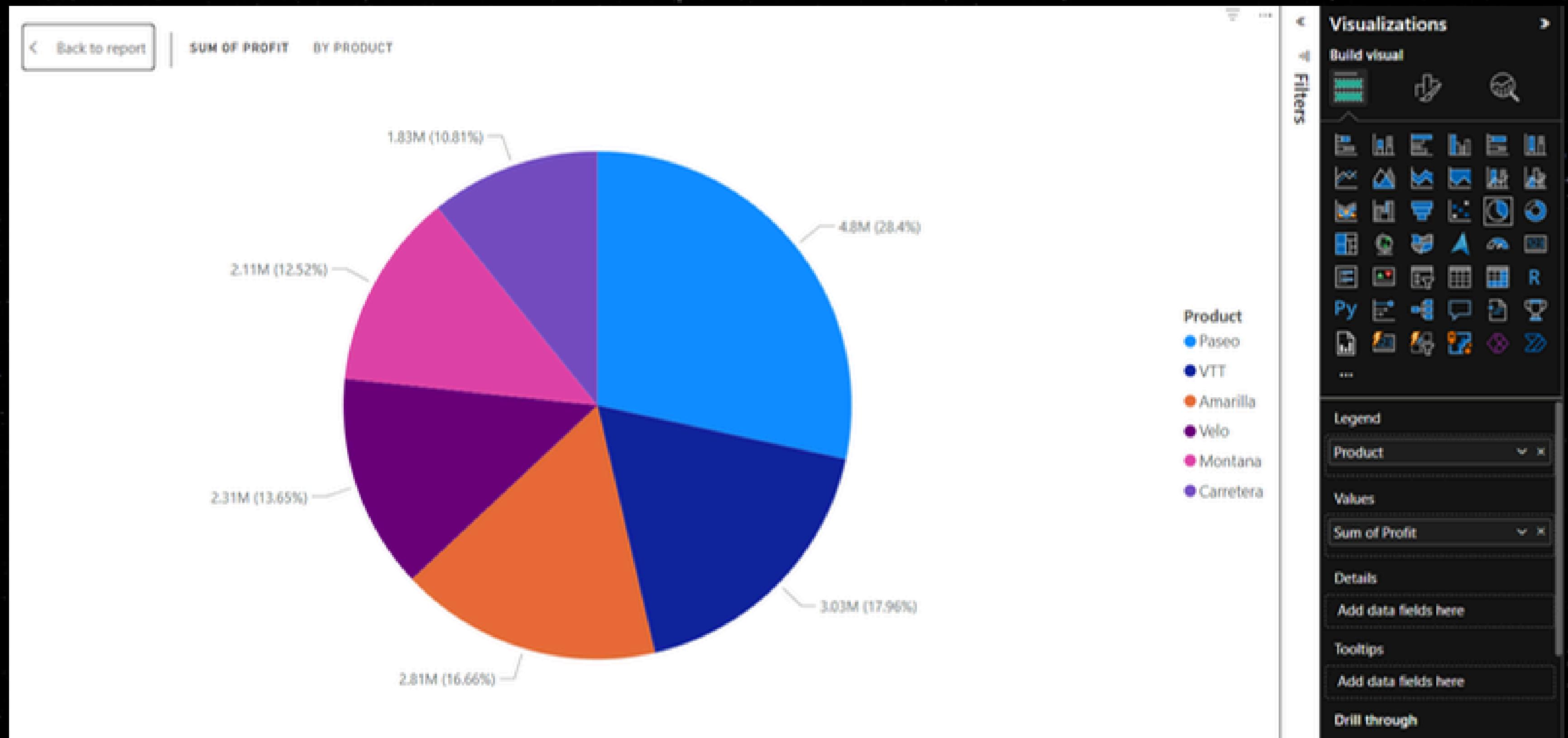
Add data fields here

Tooltips

Add data fields here



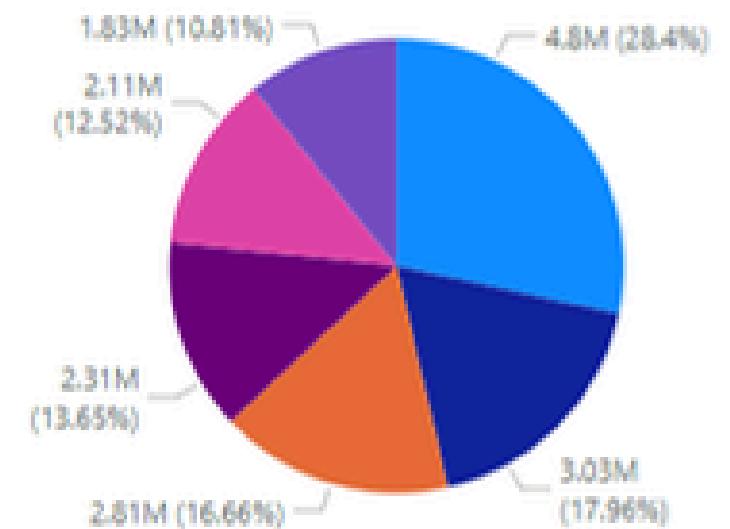
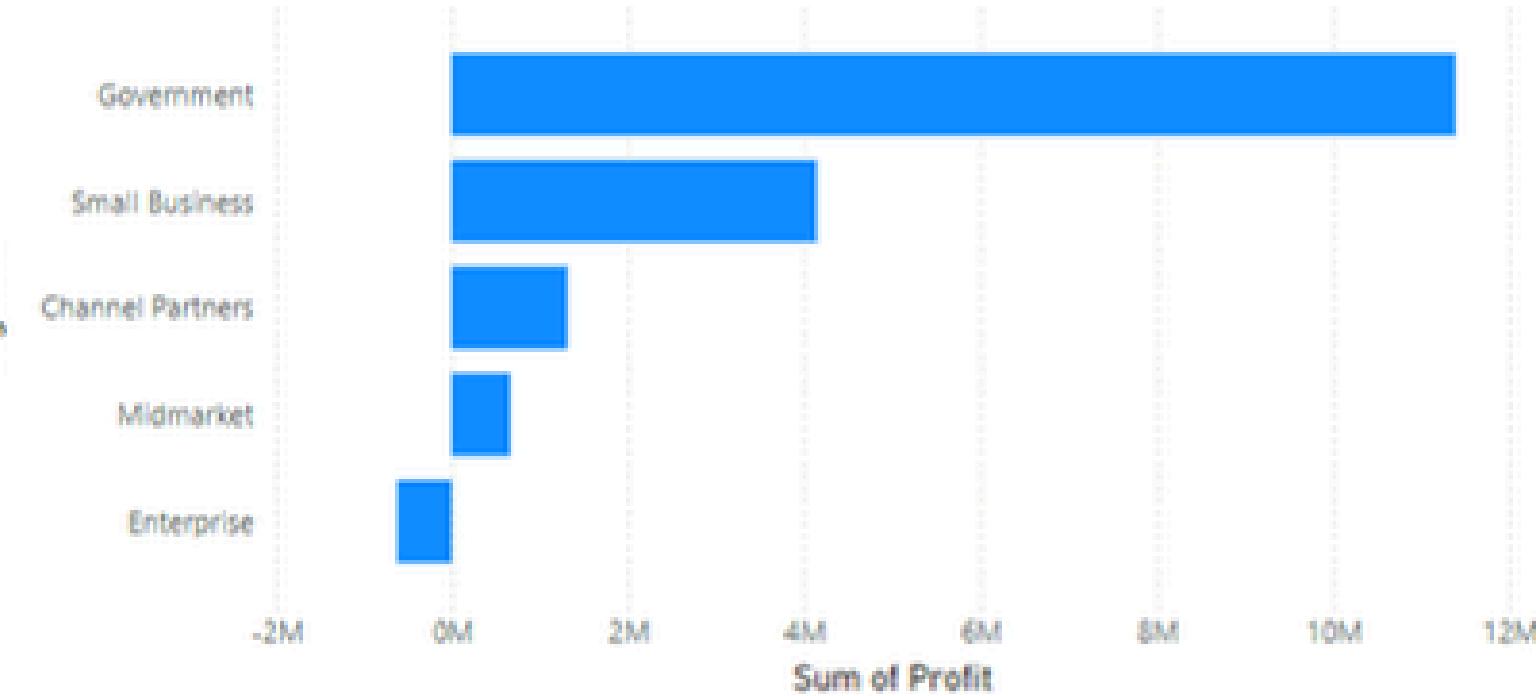
PIE CHART



DASHBOARD

FINANCE FORECASTING USING POWER BI

Sum of Profit by Segment



127.9...

Sum of Gross Sales

16.89M

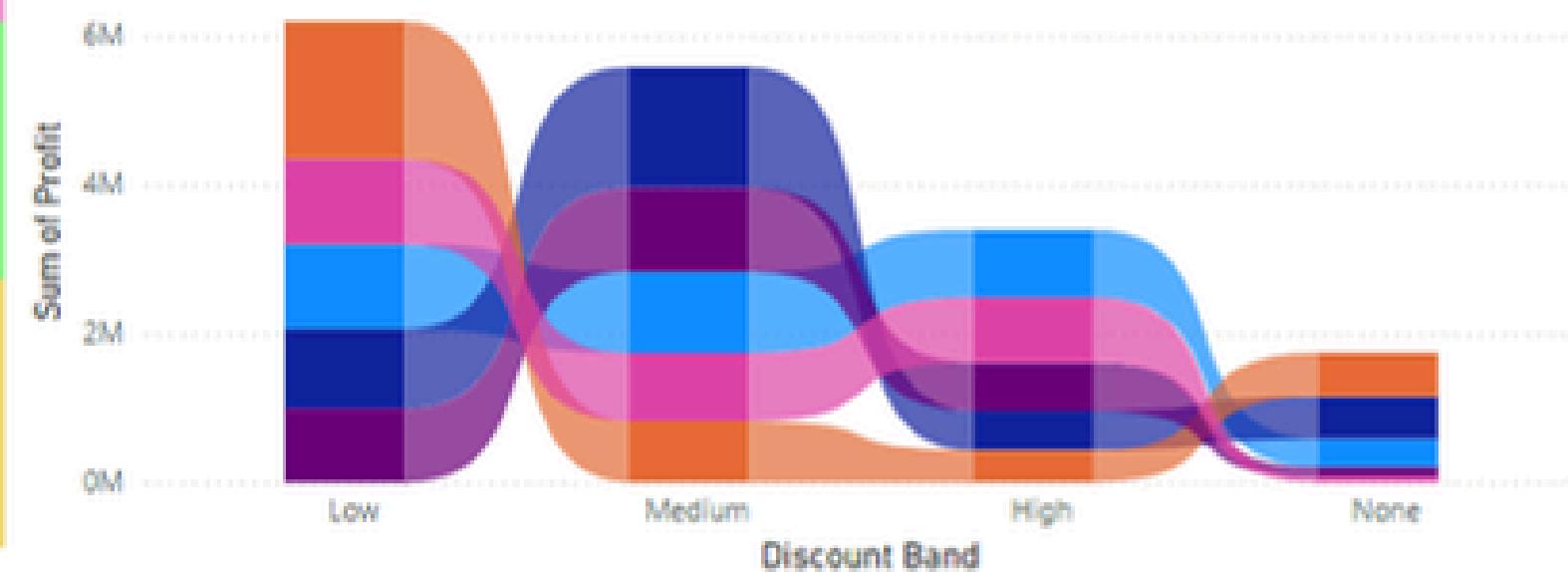
Sum of Profit

118.7...

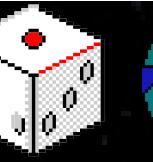
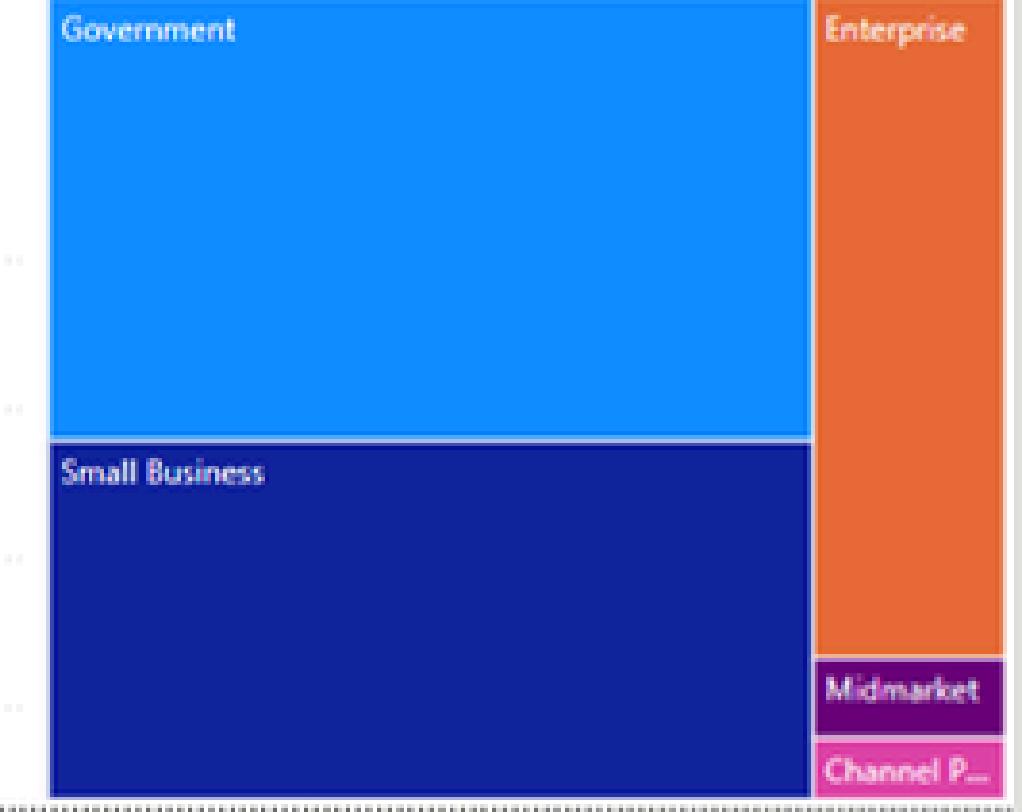
Sum of Sales

Sum of Profit by Discount Band and Country

Country ● Canada ● France ● Germany ● Mexico ● United States of America

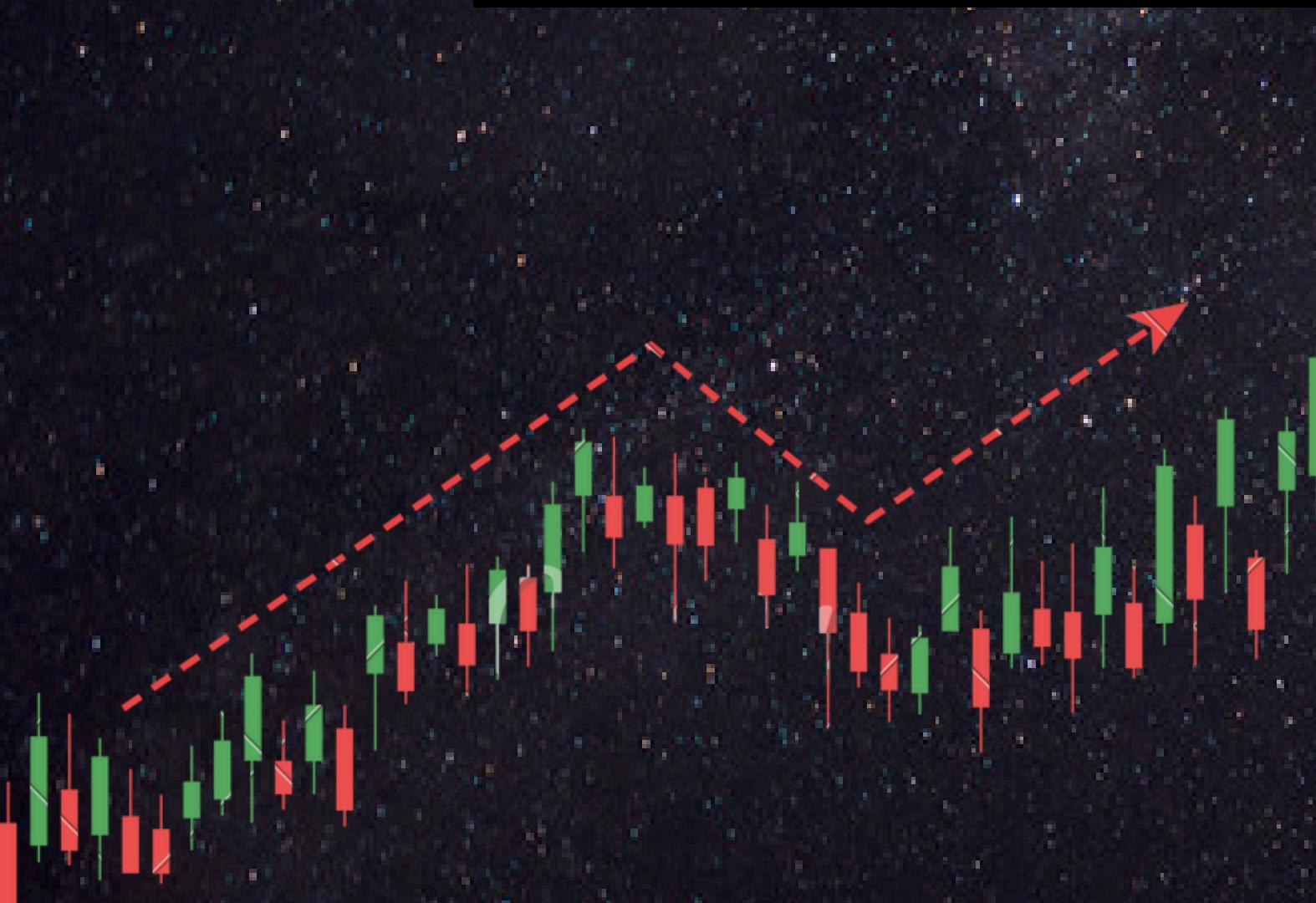


Sum of Sales by Segment



Conclusion

The finance forecasting model effectively predicts revenue, expenses, and profit trends, enabling businesses to manage finances proactively. By identifying patterns and risks, the model supports better budgeting and decision-making, fostering financial stability and sustainable growth.





THANK YOU

Project by Pratham