

PROJECT SUMMARY

MSA 2021 IoT Project Summary

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DataSet description

A Financial data consisting of 700 rows was chosen for the data analysis. It consists of data collected from various countries w.r.t various products and segments. Following are the few important features displayed in this dataset [1]:

- Countries
- Sales
- Profit
- Segments
- Product
- Discount Band

The diversity of the data along with the 700 entries was one of the main reasons for selecting this dataset. Following is the screenshot for the selected data:

Segment	Country	Product	Discount Band	Units Sold	Manufacturing	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Month Number	Month Name	Year
Government	Canada	Carreteria	None	1618	\$	3.00	\$ 20.00	\$ 32,370.00	\$ -	\$ 32,370.00	\$ 16,185.00	1/1/14	1	January	2014
Government	Germany	Carreteria	None	1321	\$	3.00	\$ 20.00	\$ 26,420.00	\$ -	\$ 26,420.00	\$ 13,210.00	1/1/14	1	January	2014
Midmarket	France	Carreteria	None	2178	\$	3.00	\$ 15.00	\$ 32,670.00	\$ -	\$ 32,670.00	\$ 21,780.00	1/6/14	6	June	2014
Midmarket	Germany	Carreteria	None	888	\$	3.00	\$ 15.00	\$ 13,320.00	\$ -	\$ 13,320.00	\$ 8,880.00	1/6/14	6	June	2014
Midmarket	Mexico	Carreteria	None	2470	\$	3.00	\$ 15.00	\$ 37,050.00	\$ -	\$ 37,050.00	\$ 24,700.00	1/6/14	6	June	2014
Government	Germany	Carreteria	None	1513	\$	3.00	\$ 300.00	\$ 529,550.00	\$ -	\$ 529,550.00	\$ 393,380.00	1/12/14	12	December	2014
Midmarket	Germany	Montana	None	921	\$	5.00	\$ 15.00	\$ 13,815.00	\$ -	\$ 13,815.00	\$ 9,210.00	1/3/14	3	March	2014
Channel Partners	Canada	Montana	None	2518	\$	5.00	\$ 12.00	\$ 30,216.00	\$ -	\$ 30,216.00	\$ 7,554.00	1/6/14	6	June	2014
Government	France	Montana	None	1899	\$	5.00	\$ 20.00	\$ 37,980.00	\$ -	\$ 37,980.00	\$ 18,990.00	1/6/14	6	June	2014

Figure 1: Screenshot of database [1]

Relevant Problems

1. Difficult to get the sales/segment-wise/profit visualization.
2. There are too many parameters which have to be considered for making a decision.
3. Getting the highest sold products - both month wise and annually is difficult with normal visualization tools.
4. Available tools are too time consuming.

Key insights

(All the insights are for the period of 1/9/13-1/12/14)

1. Paseo was the highest sold product and also the highest profitable product, followed by VTT. The figure below describes the same.

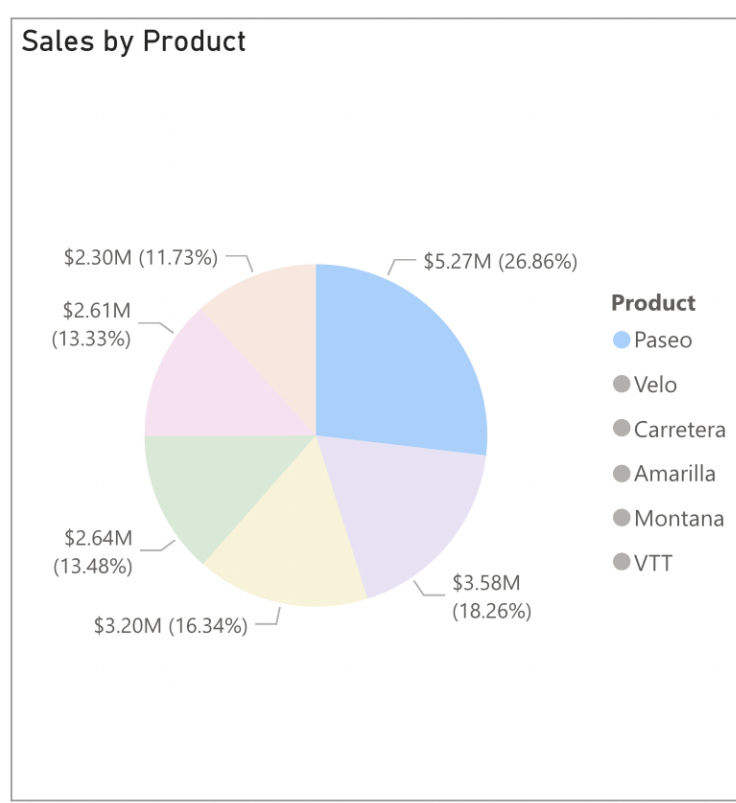


Figure 2: Distribution of sales by product

- The highest Gross sales was made by the Government segment (56.4 Million \$) globally.
- The following countries lead the respective segments:

Segment	Country
Small business	USA
Mid market	France
Government	France
Enterprise	USA
Channel Partners	Canada

- Generally the sales were at the peak in October, November and December in all the segments. One of the reasons can be the Christmas festival preparations across the world.

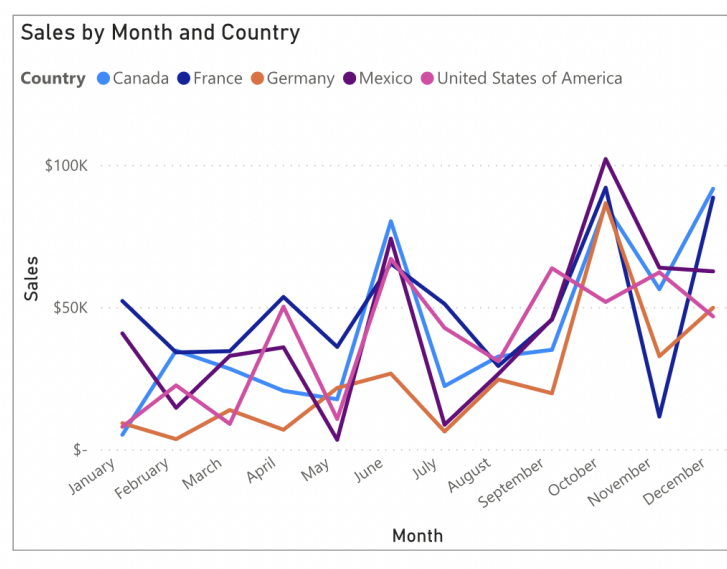


Figure 3: Distribution of sales by month and country

- Also, all the countries except Germany saw a sudden rise in sales around June for the mid-market segment.

Dashboard

The dashboard screenshots are shown in the GitHub read-me file. Power BI [2] was used for this data visualization.

Acknowledgements

I would like to thank entire MSA 2021 team for their continuous support. A special thanks to the speakers for providing an amazing and easy to understand demonstration.

References

- [1] Financial data github - <https://github.com/parulnith/data-visualisation-libraries/blob/master/data%20visualisation%20with%20power%20bi/financial%20sample.xlsx>.
- [2] Power bi - <https://app.powerbi.com/home>.