REPORT

Analytics tool for E-commerce businesses

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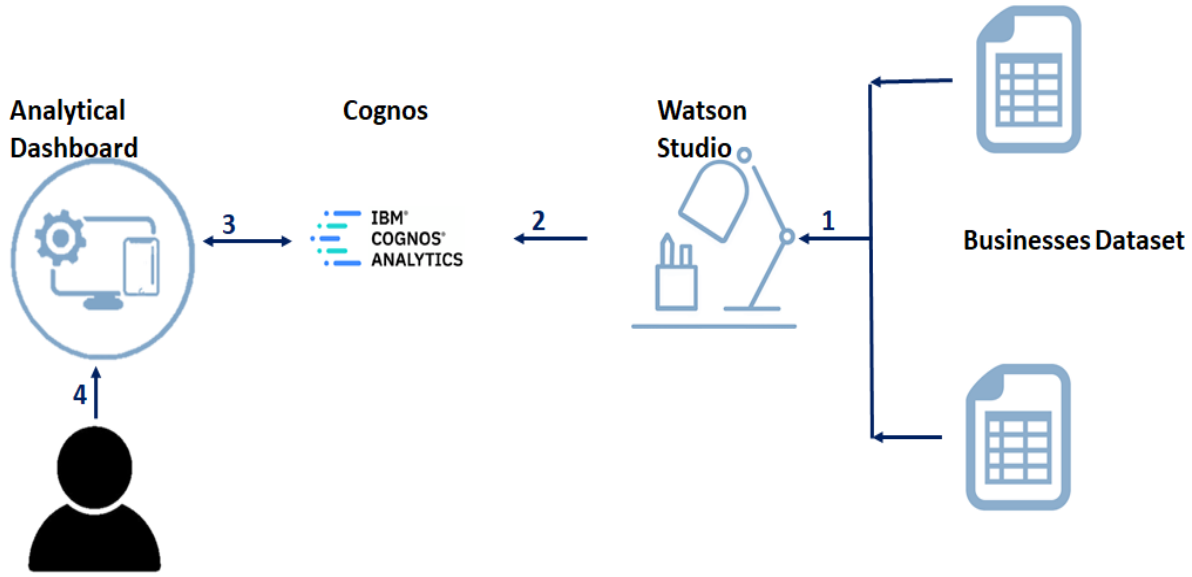
THEORETICAL ANALYSIS



Hardware/Software Designing

The following things are required:

- 32-bit Intel® Pentium® 4 or compatible processor running at 2 GHz or greater.
- 512 MB RAM
- Disk space: 350 MB for client components.
- IBM Cloud Account
- IBM cog nos Analytics

EXPERIMENTAL INVESTIGATION

Preparing the Dataset

The dataset used for creating the e-commerce analytical dashboard is of a US Superstore.
Following are the steps which are to be completed to process the data and create the data module.

1. Upload the dataset to prepare data and create a data module.

2. Pre process or clean the data as per requirement needs.

3. Read the dataset.

4. Analyze the dataset .

5. Drop unnecessary columns.

6. Change the column names.

7. Remove the randomness in the columns.

8. Find the missing values.

9. Handle the missing values.

10. Split the data into sovereign and dependent variables.

11.Split the data to train and test.

12.Train the machine with pre processed data with an Appropriate Machine learning.

13.Save the final data module

As the prediction data used for the model is classification type, we apply a logistic regression algorithm on our dataset to add the calculated fields.

Logistic regression is the suitable regression analysis to conduct when the dependent variable is binary. Like all regression analyses, logistic regression is a predictive analysis. Logistic regression is used to describe data and to explain the relationship between one dependent binary variable and one or more nominal, ordinal, interval or ratio-level independent variables.

Once the model is trained , it’s ready to make accurate predictions for creating the calculated fields.

We have used the above mentioned process to clean and format the data and add calculated fields to the existing dataset of US superstore to add precision to our data visualizations . The calculated fields added are as follows:

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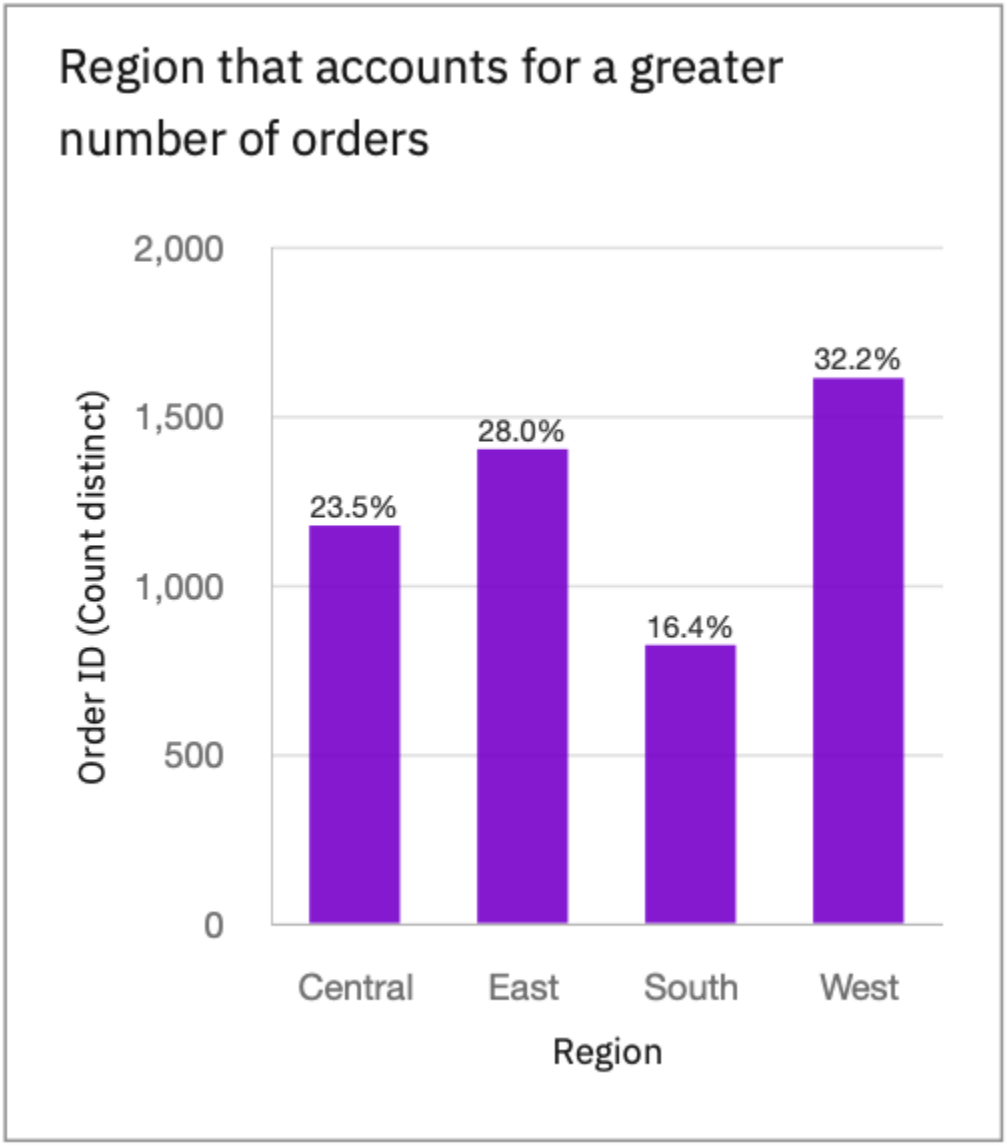
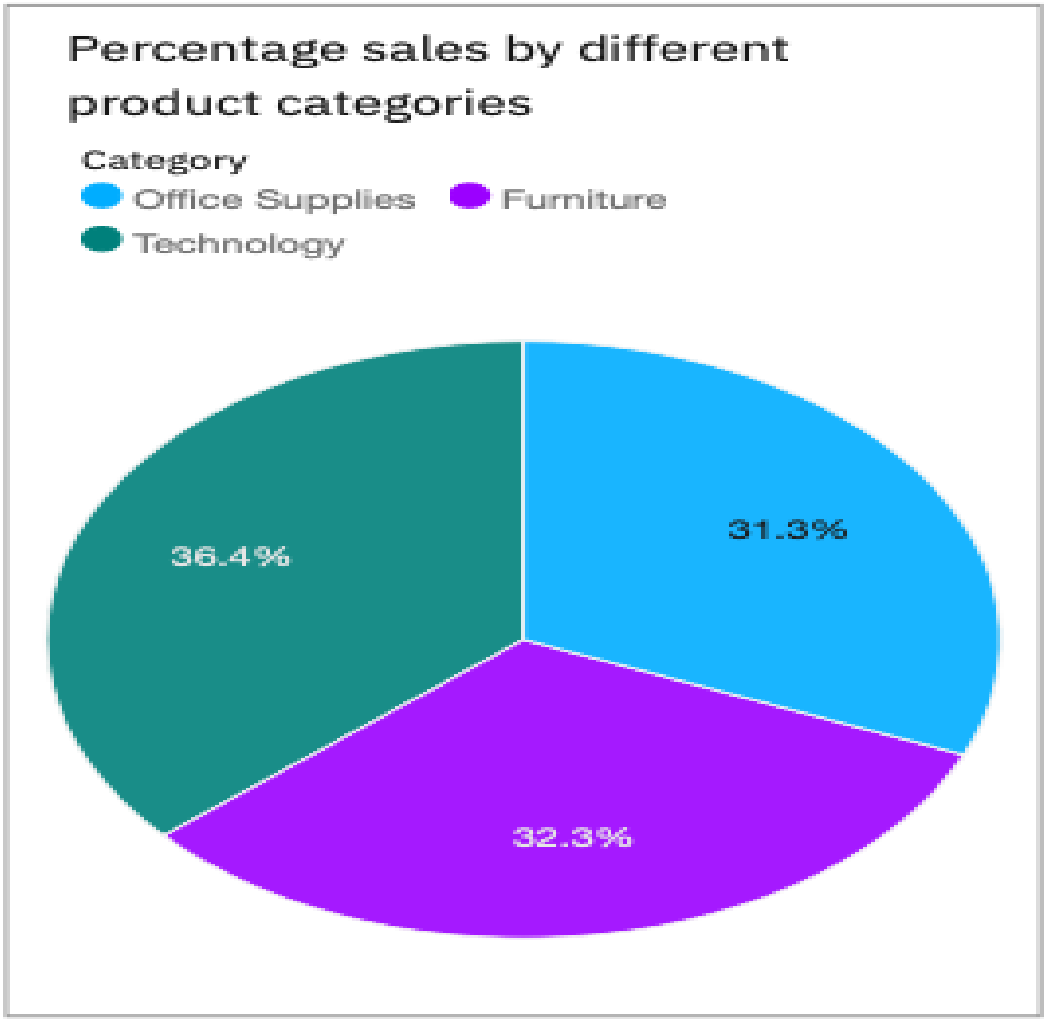
Creating Explorations for Dashboard

For preparing the dashboard we have created several data explorations to analyze the dataset the several data explorations created are as follows:

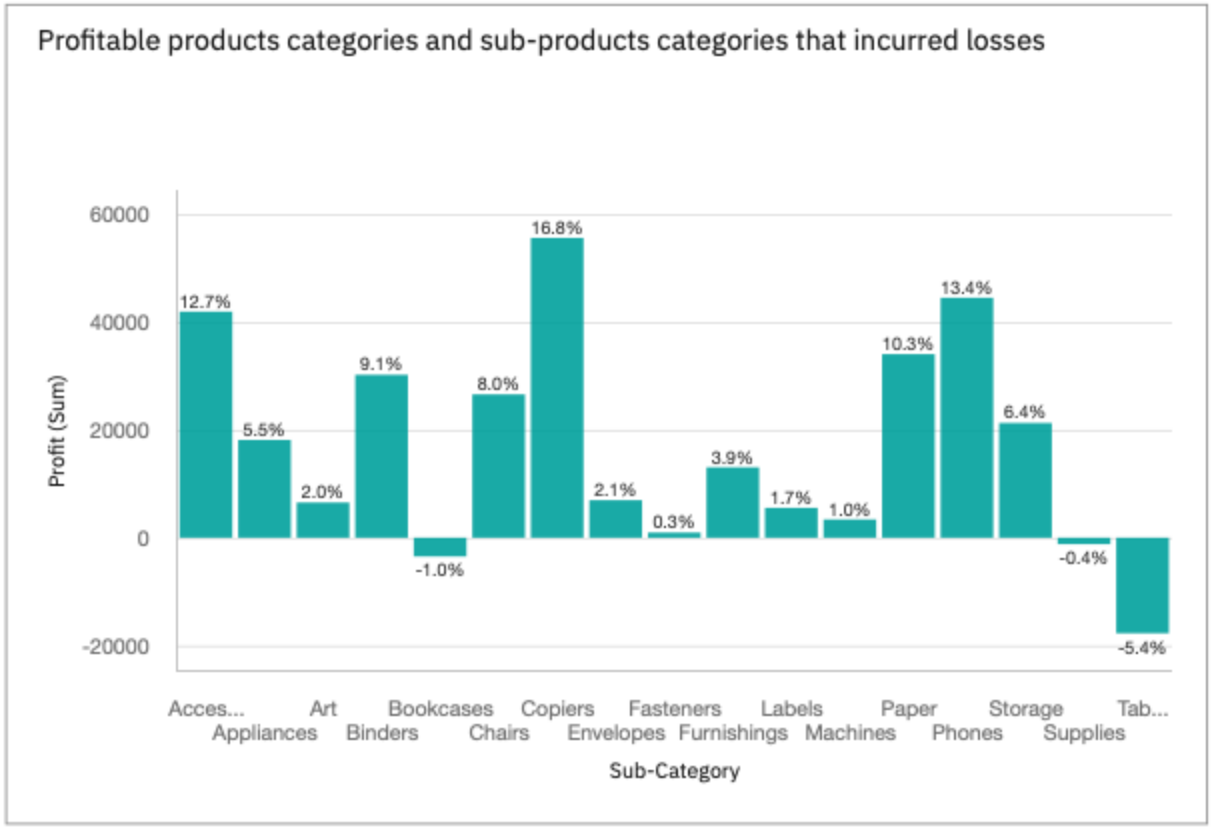
- A region that accounts for a greater number of orders



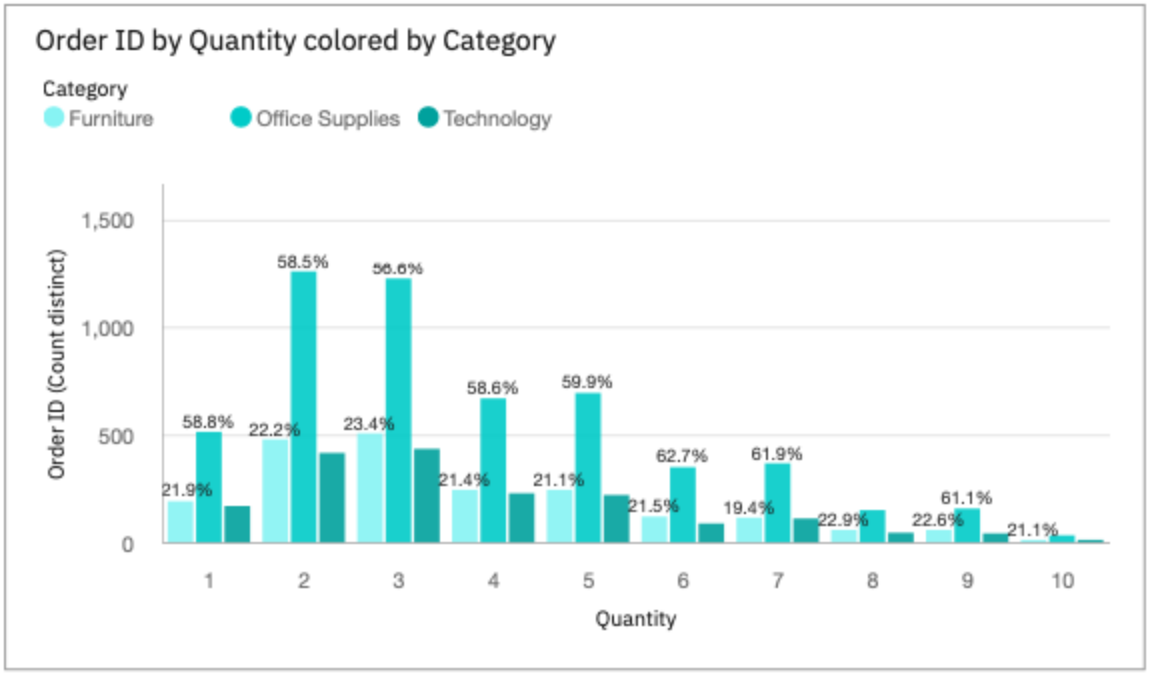
- Frequency distribution of quantity ordered
- Percentage sales by different product categories



- Profitable products or their sub-products in the last few years.
- products that incurred losses



- Product type that was ordered greater times



With this analysis, the e-commerce business can identify various aspects of the shopping pattern and take measures if required.

APPLICATIONS

There are many applications of this Dashboard in the E-commerce industry. A few of them are :

1. It will help the company to improve in many aspects such as profit and sales.
2. It will help in monitoring and tracking data.It will also help in utilizing the data to make some sense.

CONCLUSION

This Analytical Dashboard is made using IBM Cog nos Analytics. As the E-commerce industries is growing at a faster pace, the retailers are facing fierce contest. This dashboard will help them keep a track of their profit, sales, loss, et c. This will give them ideas about their customer needs. The graphical representation makes it easier to keep a track of their business. So using this Dashboard they can compete and survive in the market.

These dashboards provide critical reporting and metrics info and are integral in Business Performance Management. Much like the dashboard in your vehicle, dashboards display real-time key metrics and performance index, guiding decisions and better navigating the surrounding landscape.

We understand the imperative for dashboards in the E-commerce industry. We provide you with the ability to manage, create and share reports, monitor filings and personalize

content.

Bibliography

Resource:

1. https://www.youtube.com/watch?v=ASGjw8yHA2g
2. https://www.youtube.com/watch?v=qcf6a9QzkhI
3. https://www.youtube.com/watch?v=1VXO8p8yX9Y
4. https://www.youtube.com/watch?v=YvzSOCU3YME
5. https://www.kaggle.com/juhi1994/superstore-analysis