THE PBJ ANALYTICAL DASHBOARD

1.INTRODUCTION

1.1 Overview:

Dashboards are the visual representation of a business's progress.Analytical Dashboards help get a clear and easy understanding of how the business is doing and where it can perform better.They showcase the results of all the hard work that went into the products in an easy to interpret and simple way.

1.2 Purpose:

In order to flourish in a business, it is vital that the producers understand the pattern followed by customers when they buy products. This can help the producers improve their business and attain much greater profits. A dashboard can do this job by showcasing various trends in the data and therefore deliver valuable information. With these insights that are obtained from the dashboard, businessmen can ponder over ideas which can make their business successful in the future.

2.LITERATURE SURVEY

2.1 Existing Problem:

Considering the burgeoning population and their respective needs, it is clear that shopping has become a busy business. And in situations like the pandemic, people largely rely on the online mode of shopping. Several e-commerce websites have been created to assist people in this case. But the effectiveness of an e-commerce website depends on the relevant and desired products they sell. Determining what products are relevant and what is the need of the hour is arduous. For these reasons, an interface that can act as a bridge between the customers and the producers is crucial.

2.2 Proposed Solution:

A sample e-commerce website is created using Node-Red for gathering real time data about what the consumers buy. A dataset that consists of past data is used and new transactions are appended to it. Various areas of analysis is carried out to determine the patterns in which customers buy products.

Some examples of analysis include ,

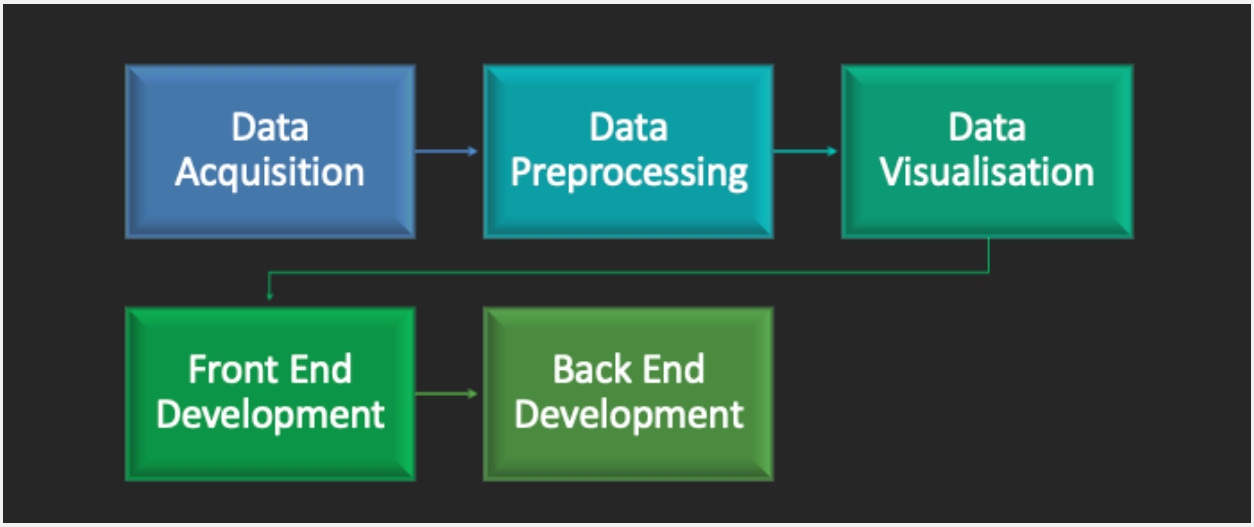
1.Region that accounts for greater number of orders.

2. Frequency distribution of quantity ordered.
3. Percentage sales by different product categories.
4. Profitable products or their sub products in last few years.

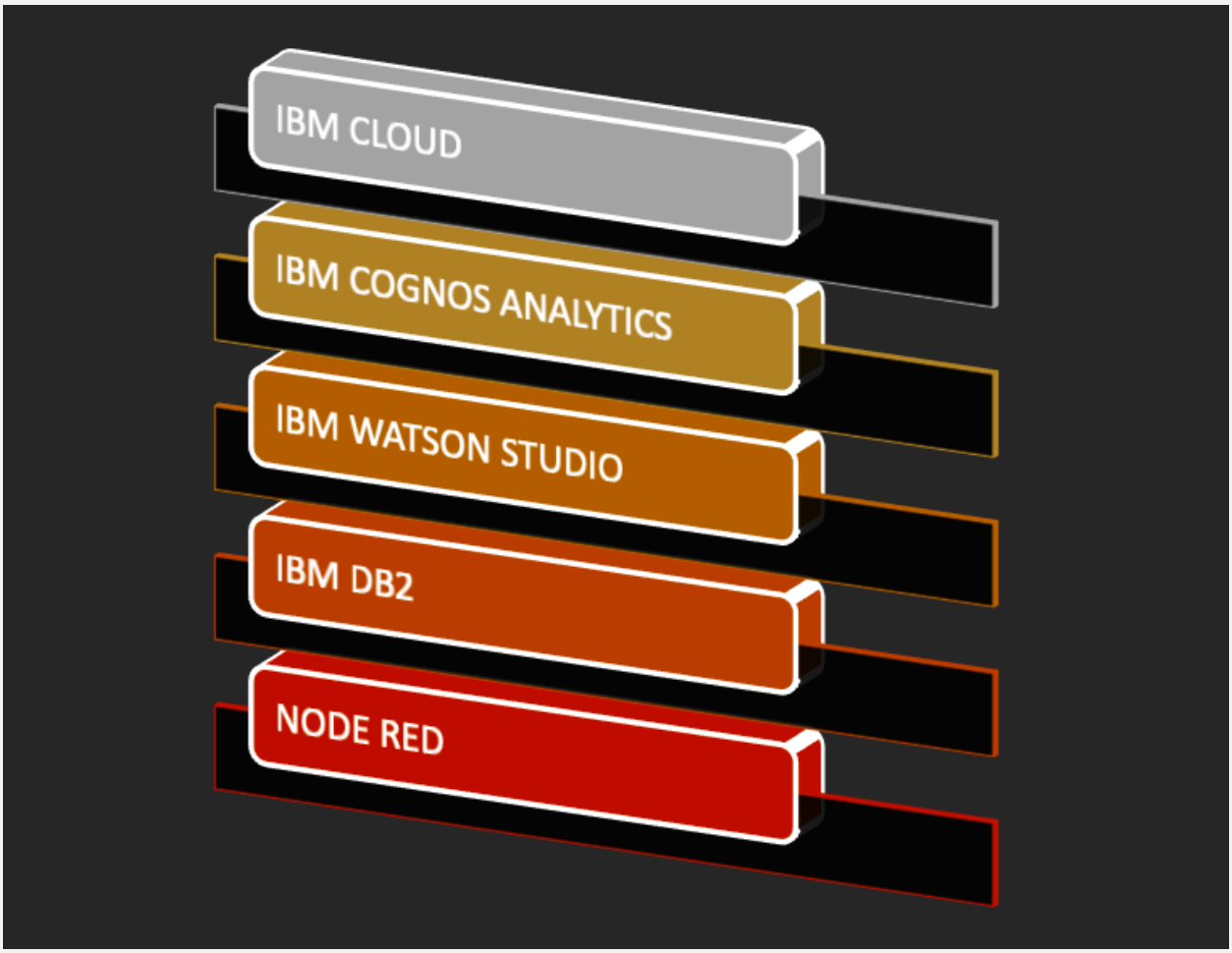
These analysis are carried out with the help of IBM Cognos Analytics. Graphs like bar chart, pie chart, heat map and legacy maps are used in depicting the trends in the customer data. Various lists are used to show categories of products that are most frequently bought.

3.THEORETICAL ANALYSIS

3.1 Block Diagram:



3.2 Hardware/Software Designing:



4.EXPERIMENTAL INVESTIGATION

Steps involved in experimental investigation are as follows:

Step 1: Project Idea

The Business field is ever changing , having a clear cut idea about what is happening in is vital in this field. As a step towards achieving it , we have created an analytical dasboard that can effectively make people get further insights about all the happenings in their business.

Step 2: Background Research

In order to familiarize with business plans and sales trends,dashboards can be really effective.By connecting the database , data is obtained from the vendors site

dynamically which helps in deriving numerous analytical conclusions,that keep changing with every order.

Step 3: Hypothesis

Creating a dashboard with varied dynamic content that helps businessmen understand a customer's mindset and thoughts.

Step 4: Design of experiment

Based on the data acquired , an optimal way is chosen to group the data to convey the clear information .

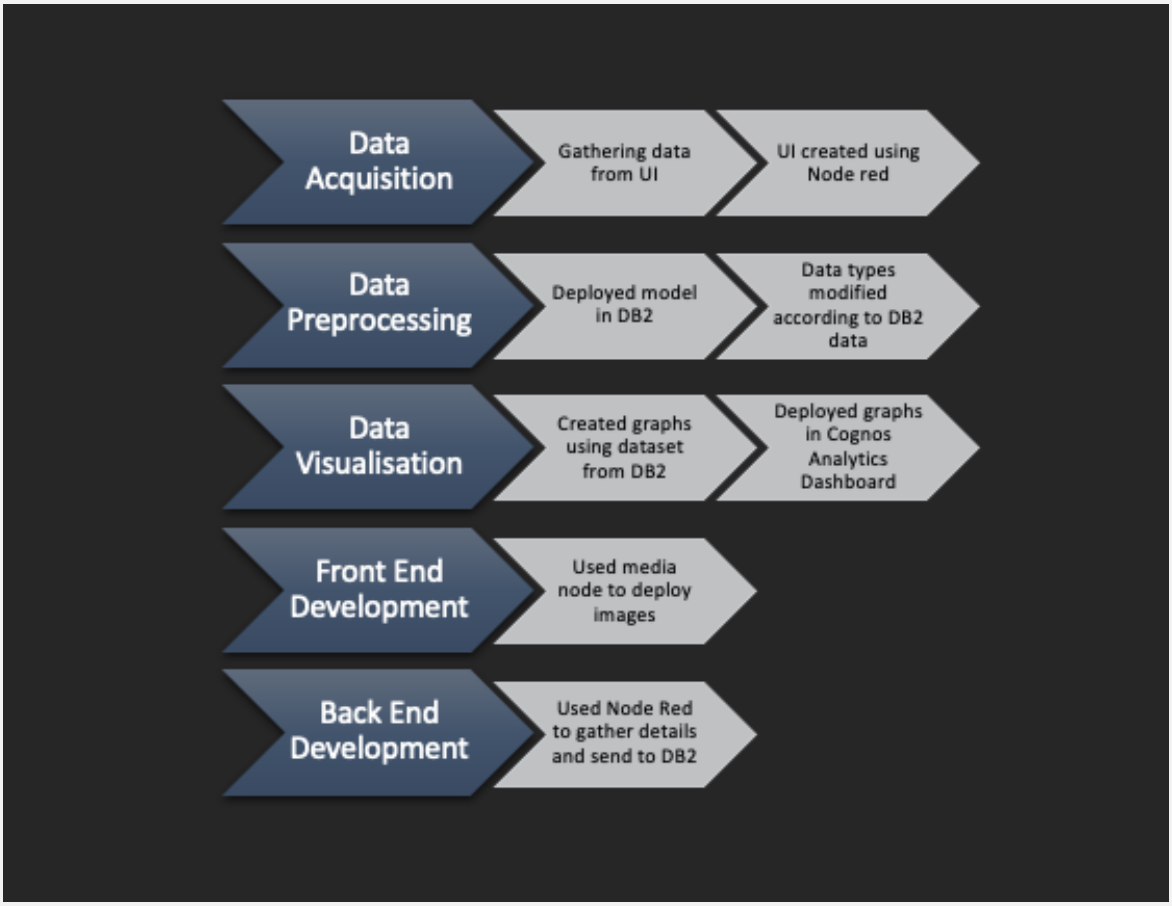
Step 5: Data Collection

By connecting the database of the store directly to the dashboard,data is gathered.

Step 6: Data Analysis and Conclusion

Analysis of data is made by employing various machine learning models based on classification and clustering. The data is visualized as donuts,histograms,etc using cognos analytics.

5.FLOWCHART



6.RESULT

With the help of PBJ analytical dashboard, efficient business can be guaranteed. Further, new strategies and techniques can be incorporated by the businessmen to make the e-commerce website beneficial for the disseminated customers across the globe.

7.ADVANTAGES AND DISADVANTAGES

By creating a dynamic dashboard, timely information about the performance of products can be obtained easily. Furthermore, the analysis of the data can help businessmen reach conclusions about what changes could be made to increase the profits. Being in an era where we rely on the internet for most of our needs, creating an analytical dashboard that assists people in improving their business would be highly desirable.

Data acquisition due to the restrictions imposed by prevailing e-commerce websites such as Flipkart, Amazon etc was a challenge. Creating a sample e-commerce website in order to gather real-time customer data and deliver immediate analysis of the same was therefore crucial.

8.APPLICATIONS

1. Spontaneous analysis of e-commerce data
2. Efficient data interpretation.
3. Can be used in single and multi vendor projects.

9.CONCLUSION

The notion of this project is to aid businessmen in knowing about their customers and to gain insights regarding the patterns followed by customers whenever they buy a product. With the "PBJ Analytical Dashboard" in the market , a fecund business is guaranteed .

10.FUTURE SCOPE

Considering the present era, with new technologies coming out each day, new techniques for analyzing the data are to be incorporated for gathering logical insights and for reaching valid conclusions.

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