

PROJECT REPORT

Analytics Tool for E-Commerce Business

TEAM NAME: TECHNO TITANS

TEAM MEMBERS:

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1. Introduction:

1.1 Overview:

E-commerce trend is found to expand with increase in population. With a rapid demand for online shopping, it is highly essential to analyze the growth of their business with respect to sales, profit, frequently purchased, and also **forecasting future sales**. Hence we bring in an **exemplary analytical dashboard** for the owners to understand all possible enhancements that has to be done to **upscale their production**. We have given all possible insights that will help the users to get quick overview.

1.2 Purpose:

Our **Analytical Dashboard** is completely user friendly and it is designed in a way that grabs the owner's attention as the representation is made **appetizing and interesting**. Also, we are providing additional insights based on Personalized Marketing, Inventory Planning, and Customer Service etc. The sign of good social impact is seen because when the **production increases**, eventually the **cost decreases** which will satisfy the customers

and they will tend to buy more products. The ultimate purpose for analytics is to build a strong **marketing strategy** which can be achieved through our project.

2. LITERATURE SURVEY:

2.1 Existing Problem:

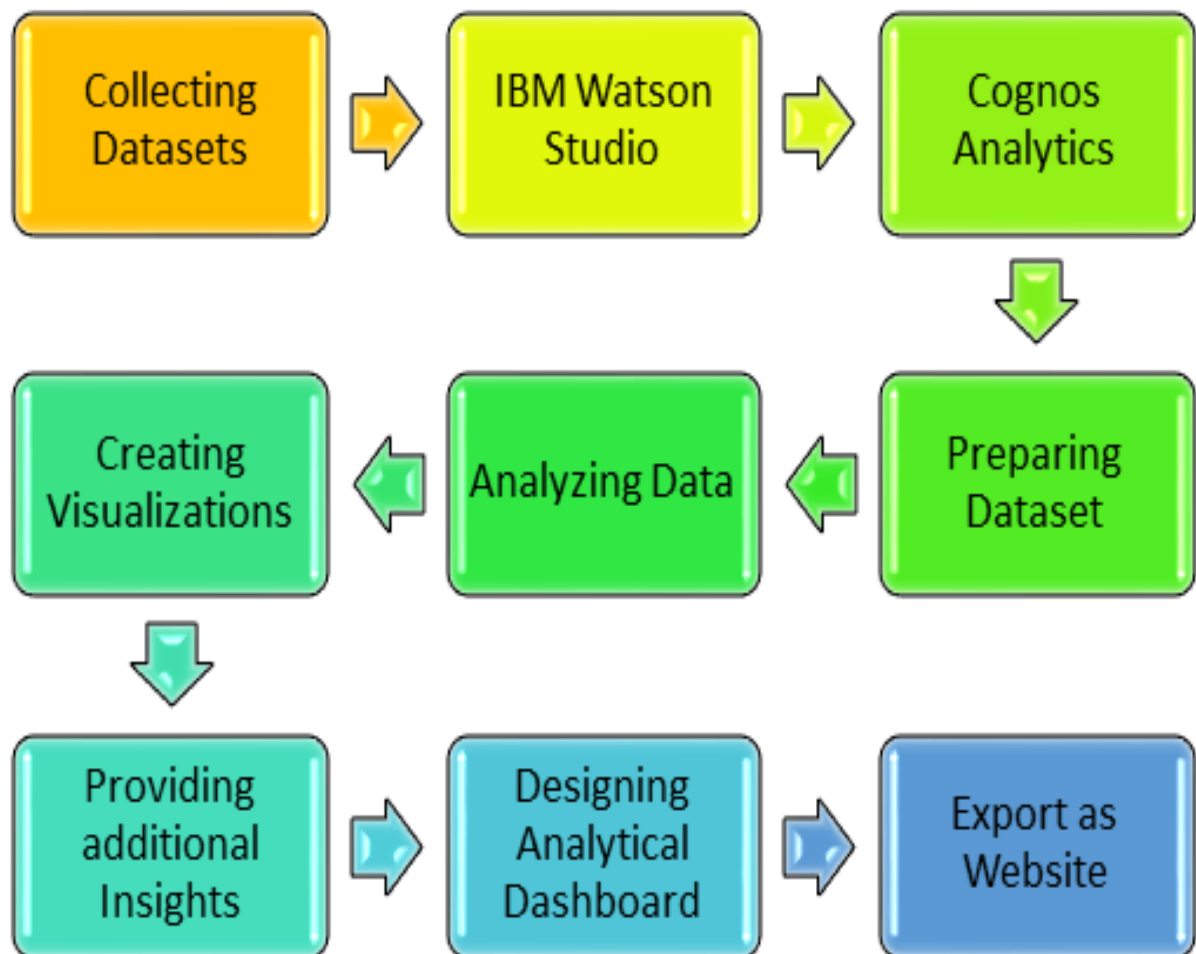
Understanding customer needs is a **primary key** to achieve a successful business. It might be a tough task for a **business man** to analyze each column skimming through the datasets. And of course, mind calculation for about 40,000 rows is impossible. Also it is highly important to **represent the visualization graphs** with suitable data that can be read by the users.

2.2 Proposed Solution:

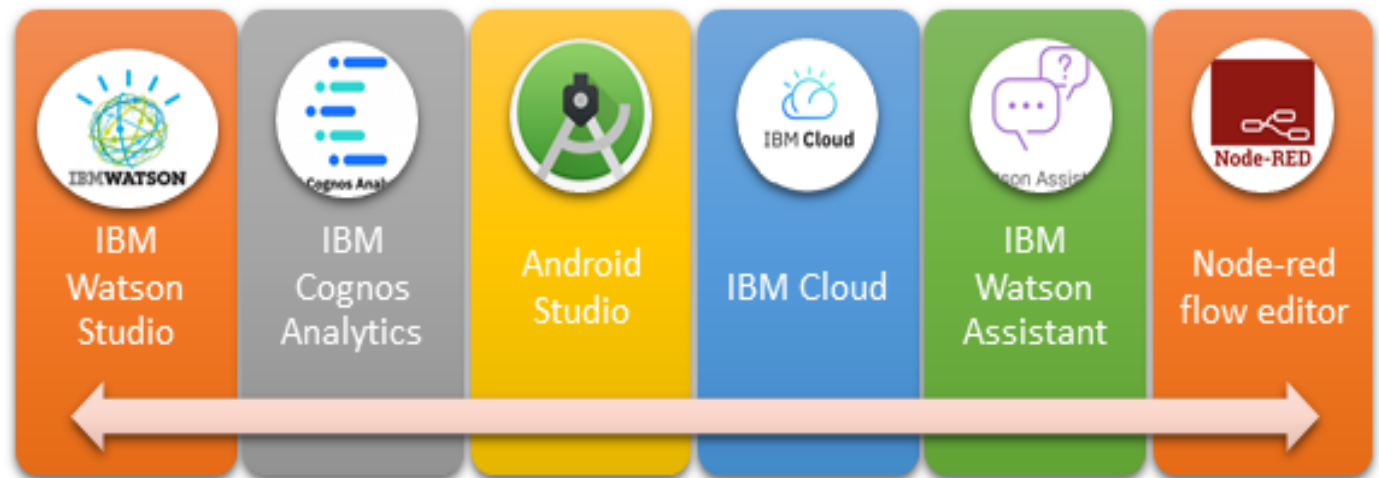
It's high time we take a call and **analyze** the customer needs and increase or **decrease the production**. Hence with the help of **Cognos Analytics**, we have built a dashboard where there are 15 tabs, each representing a unique relationship that needs to be solved. We have used **Data Player** to highlight the top values which would be more appetizing for the users. Not only this we know it is a tough COVID period and we have built an “**Early Diagnosis of Corona**” using Machine Learning Services. We have also given Cowin website to encourage users to get vaccinated and associated Google maps to find their nearby hospitals. We have also given analytics on the vaccinated counts along the prediction form.

THEORETICAL ANALYSIS:

3.1 Block Diagram



3.2 Hardware/ Software Designing:



4. EXPERIMENTAL INVESTIGATIONS:

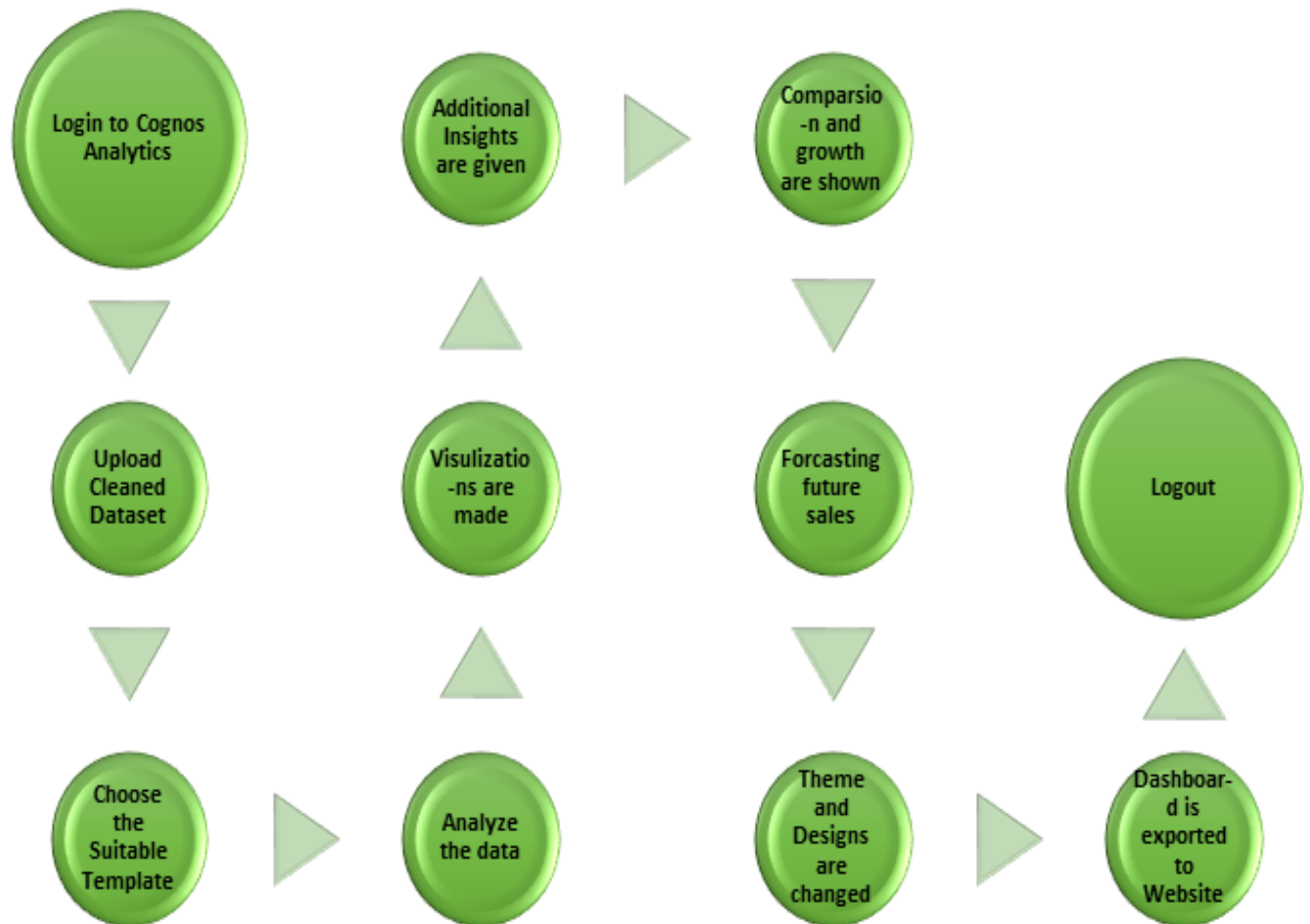
- ✓ E-Commerce business has grown gradually over past few years.
- ✓ E-Commerce Analytical Dashboard provides all the required insights for the growth of business.
- ✓ It provides the profit, loss, sales growth over years, future sales forecast, frequently bought products, Repeatedly purchased customers, profitable products, products that incurred loss, Region with greater number of orders etc.
- ✓ This enables the user to discern the measures which has to be taken to improve the Business.

5. FLOWCHART:

5.1 User Work Flow



5.2 Backend Work Flow

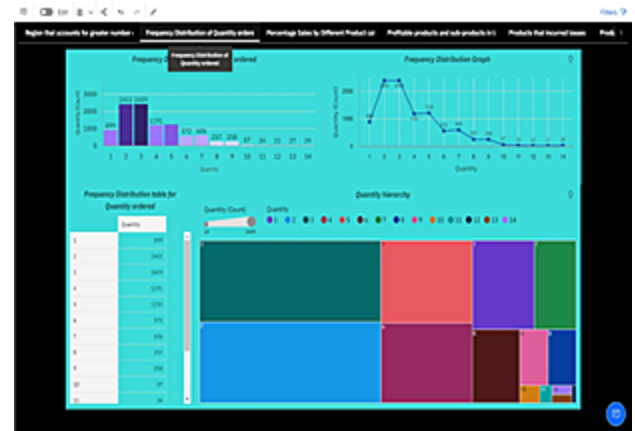


6. RESULTS:

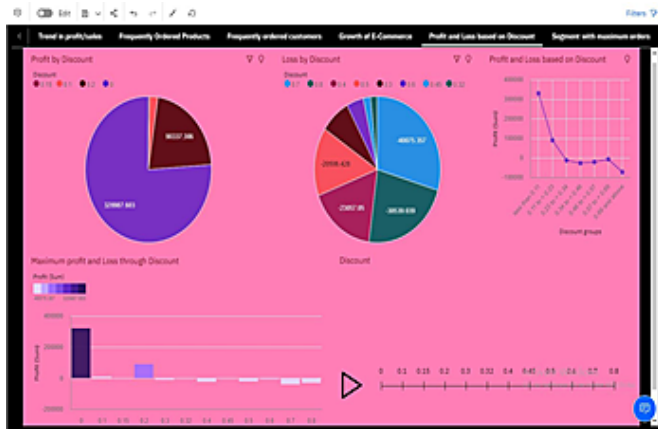
As a result we have built an impressive dashboard with various tabs each explaining a particular relation and showing suitable insights. The screenshots of the output are attached below.

We have given additional solutions than expected ones.

Also the COVID Predictor is included using Machine Learning Services.







The interface includes a sidebar with the following navigation options:

- PREDICTION
- COWIN
- CHAT BOT
- ANALYTICS
- NEARBY LOCATION

 The main form is titled "Please fill the form" and contains the following input fields:

- Fever: Select option
- Tiredness: Select option
- Drycough: Select option
- Difficulty in Breathing: Select option
- Sore-Throat: Select option
- Pains: Select option
- Ranget-worse: Select option
- Diarrhea: Select option
- Age_0-9: Select option

The interface includes a sidebar with the following navigation options:

- PREDICTION
- COWIN
- CHAT BOT
- ANALYTICS
- NEARBY LOCATION

 The main form is titled "Please fill the form" and contains the following input fields:

- Age_10-19: Select option
- Age_20-24: Select option
- Age_25-29: Select option
- Age_30-34: Select option
- Age_35-39: Select option
- Age_40-44: Select option
- Gender_Female: Select option
- Gender_Male: Select option
- Gender_Transgender: Select option
- Country: Select option

 At the bottom of the form, there are two buttons: "SUMMIT" and "CANCEL". Below the buttons, it says "Your Predicted Report is:".

7. ADVANTAGES:

- It helps organizations to reduce risks. By helping them analyze, they can make the right decisions based on available data such as customer preferences, trends, and so on.
- Analytics gives business an excellent overview and insight on how companies can become more efficient and work on their flaws.
- In our dashboard, the user can easily understand about the sales over the years, profit gained, products which were sold greater times and so on.

8. APPLICATIONS:

- As technology evolves rapidly and shopping trends shift on a daily basis, ecommerce is in a constant state of adaptation in our day to day lives.
- To understand the growth of today's business our ANALYTICAL DASHBOARD gives a quick knowledge on the data. Companies these days have a large amount of financial data.
- Use of Analytical Dashboard helps use this data to determine the products' sales, profit, loss and more.
- By analyzing the trends, and consumer behavior helps in identifying the target audience and improve the marketing strategy based on the profit gained and sales percentage.
- Companies understand the pattern of their customers likes and dislikes by analyzing the data in the given insights.

9. CONCLUSION:

Marketing without analyzing is like driving with our eyes closed. It is always important to know the needs of customer to run a profitable business. Hence with our dashboard the owner can easily figure out the enhancements to be made and to build a good business strategy. Also, we have an attractive website through which they can reach us out for queries. As an add-on we have provided a COVID predictor which will again benefit the user. So, our Analytical Dashboard will be an apt solution to experience a progress in e-commerce.

10. FUTURE SCOPE:

The Internet has become an undivided part of our lives. E-commerce has bloomed over the years and is one of the fastest-growing domains in the online world. To the present day, the internet sales boom is the foundation for a magnificent e-commerce future.

Our project mainly focuses on getting dominant insights from the data that helps the company grow its business. The operating sector such as Collecting datasets, Analyzing the data, and Providing relationships and Insights. This process makes to predict the trends and helps to forecast future sales strategically. Due to the rapid formation of the digital world, In the foreseeable future, e-commerce websites will be the vital tool of trading for goods and services and create a substantial impact on the lifestyle.

Enhancements that can make in the future scope of E-commerce:

- Due to the analysis and prediction of our e-commerce website, we would like to furtherance our website to the choice of customers. So they can modify their own needs/preferences accordingly. Also, the product page enhancement makes them analyze products and incentives to purchase.
- We would also like to improve the e-Commerce site through the following enrichments.
- Social media influence
- Design enhancement like mobile apps with redeeming feature of instant chat.
- Product page enhancement like product analysis and incentives to purchase.
- Make an easy and reliable search system.
- Drone deliveries to avoid the traditional systems.
- Offering customized solutions to users in case of searching difficulty.

11. BIBLIOGRAPHY:

Following links have been used in the completion of the project.

PavleenKaur— “Data Visualisation made easy” July 27, 2017

<https://www.analyticsvidhya.com/blog/2017/07/data-visualisation-made-easy/>

Kaggle – “Us Superstore data”

<https://www.kaggle.com/juhi1994/superstore-analysis>