

Analytics Tool For Ecommerce Businesses

Introduction:

We are living in the digital era. Everything have become online nowadays . Especially during this pandemic, people preferto purchase online. Also , 25 % of retailers launched their own e-commerce store. From A to Z all the diverse products are available here. So, to maintain our store effectively andto run a successful business , the maintenance of data like revenue , no of orders , customer feedback is very important . So we are planed to make ANALYTICAL DASHBOARD containing metrics and Other data without spending more minutes or even hours on our data using IBM Cognos Analytics tool. By analysing such data we can improve our online store effectively in all aspectsand understand our customers better.

Objective:

We are going to build a user friendlyinterface which containsall the staticssuch as:

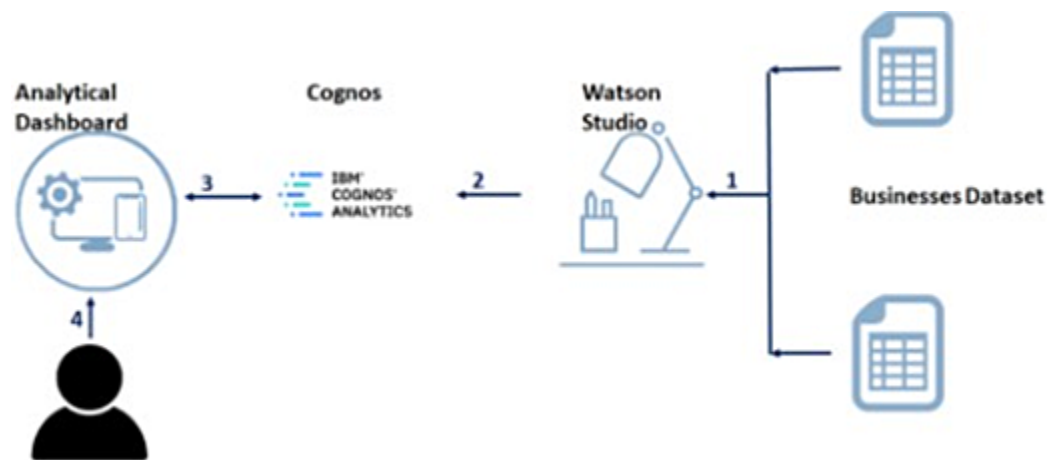
1. Region that accounts for greater number of orders.
2. Frequency distribution of quantity ordered.
3. Percentage sales by different productcategories.
4. Profitable products or their sub products in last few years.
5. Products that incurred losses.
6. Product type that was orderedgreater times.
7. Yearly sales for various states.

8. Forecasting future sales according to shipping date.
9. Trend in profit/sales over time (years/months/quarters).

Technology used:

IBM Cognos Analytics, IBM Cloud, IBM Watson Studio.

Block diagram:



Flow:

step 1:

collect the required dataset from <https://www.kaggle.com/juhi1994/superstore> and edit it according to your desired dataset.

step 2:

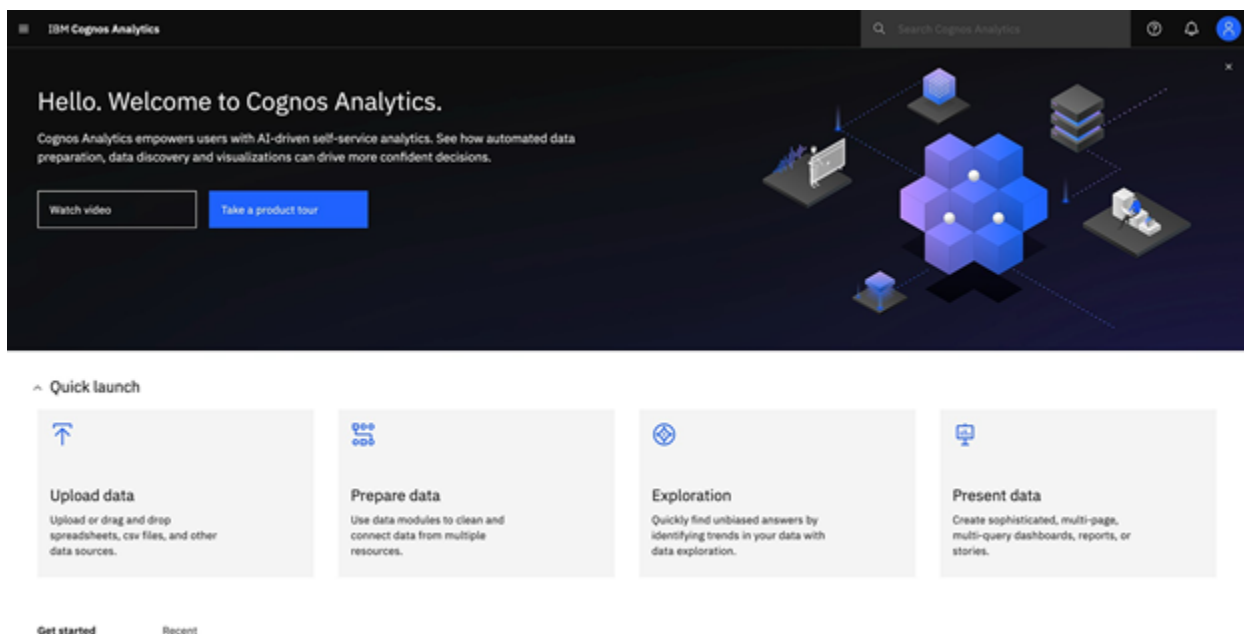
open ibm cognos analytics and start your free trail and then Click , and click Dashboard

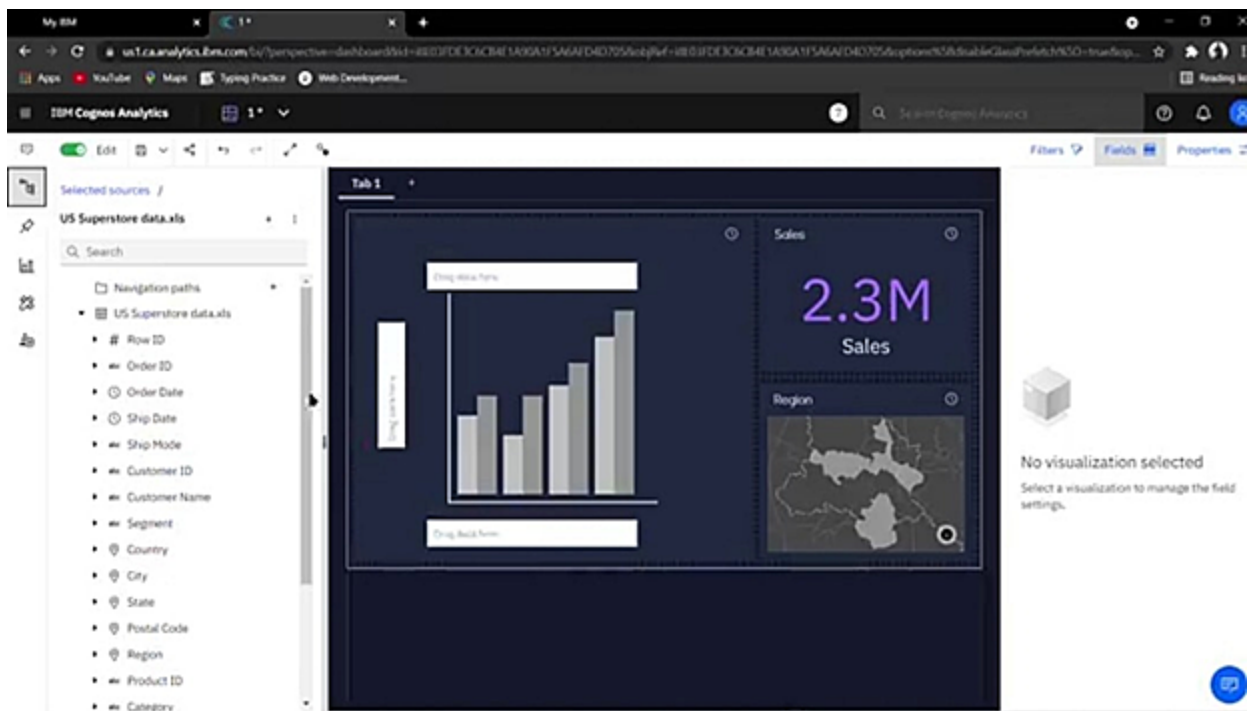
step 3:

upload the dataset

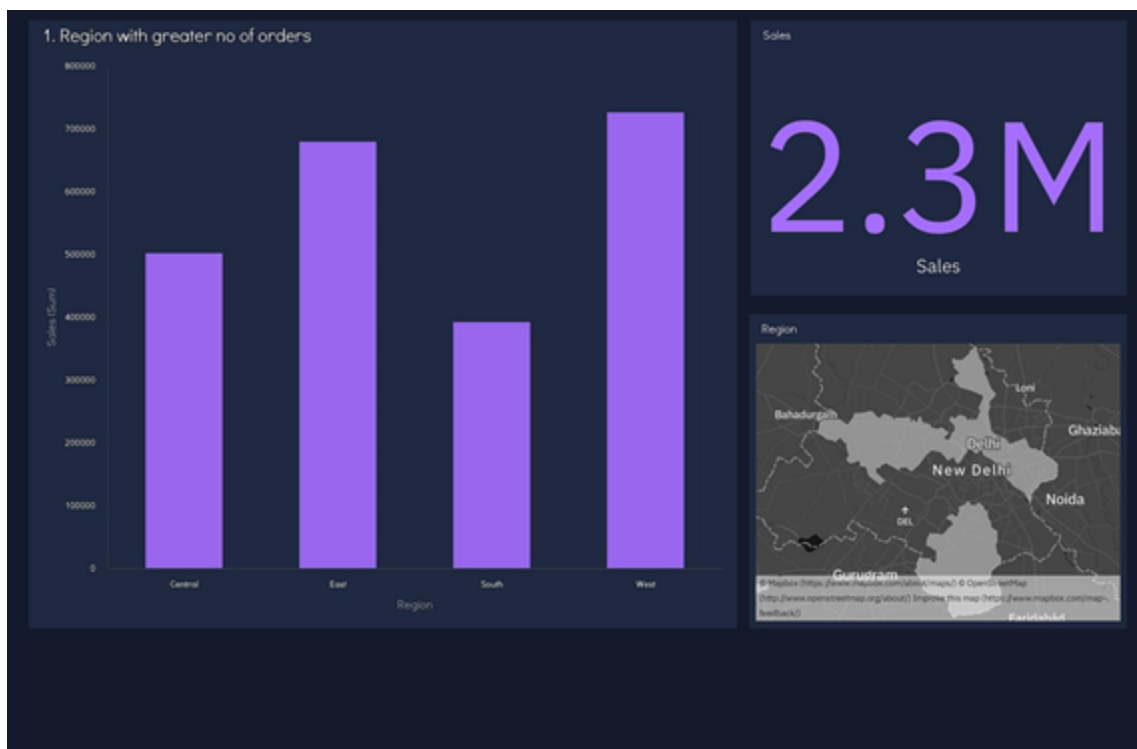
step 4:

drag the features needed to be analysed and create your own desired graphs and make it attractive by using filters.

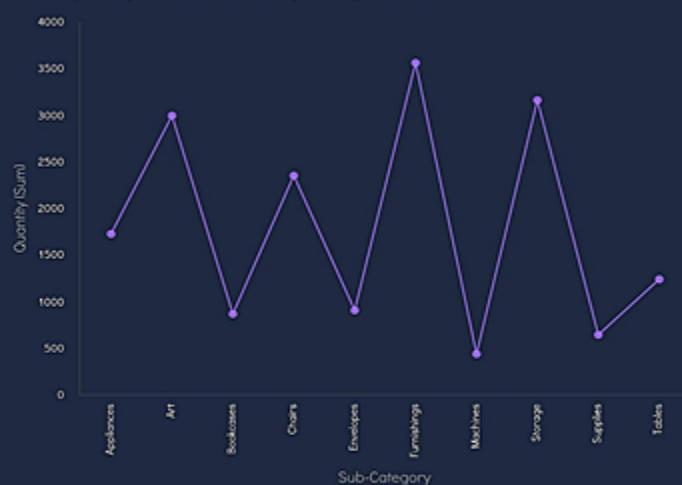




Result:



2. Frequency distribution of quantity ordered



Quantity

37.9K
Quantity

Sub-Category

Sub-Category

Accessories

Appliances

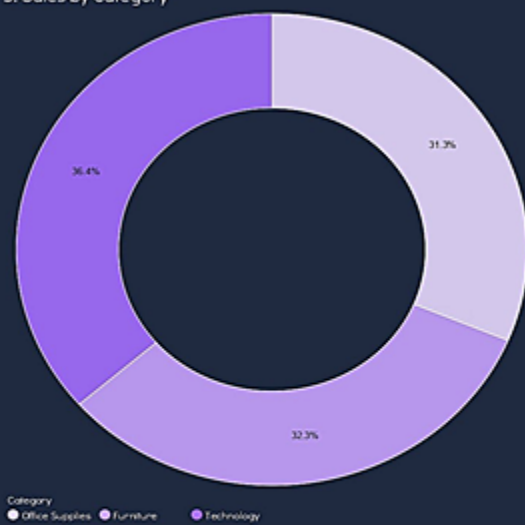
Art

Binders

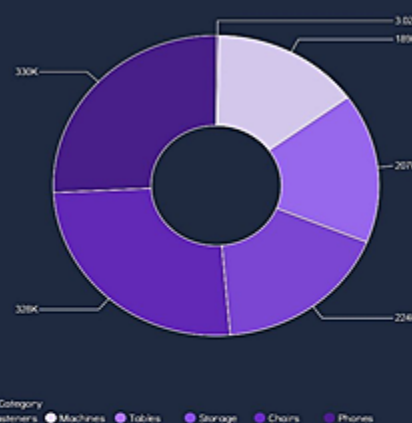
Bookcases

Chairs

3. Sales by Category



Sales by Sub-Category



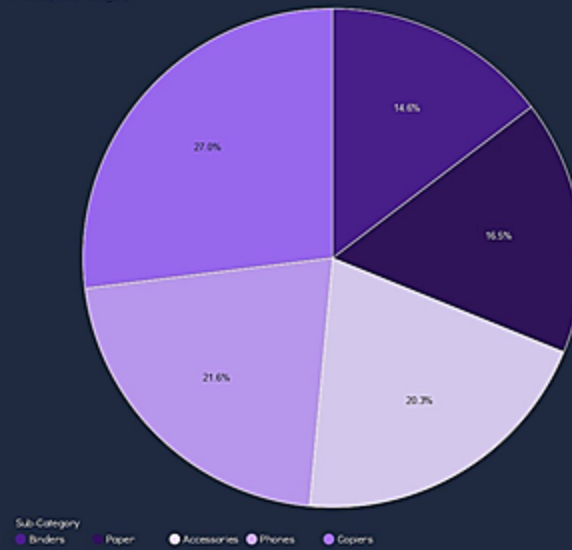
4. Profitable sub-category

286K
Profit

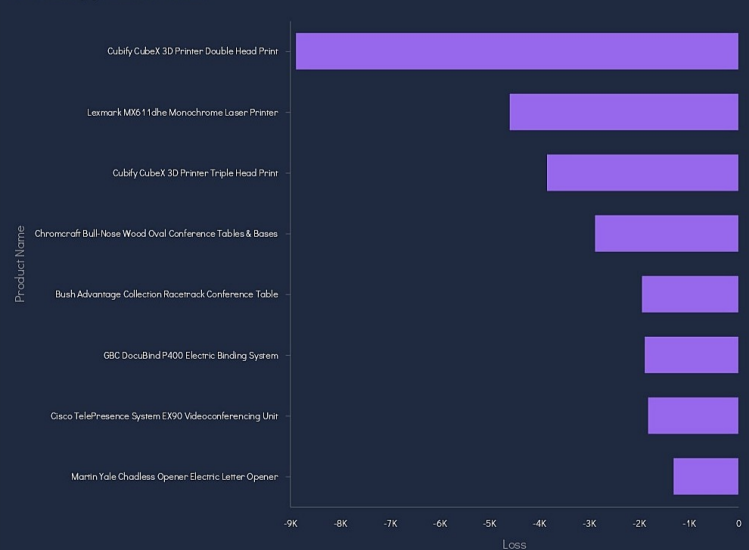
Sub-Category

Sub-Category
Accessories
Appliances
Art
Binders
Bookcases
Chairs
Copiers
Envelopes
Phones
Paper

Profit by Sub-Category



5. Loss by product name



Product Name

Product Name
"While you Were Out" Message Book, One Form per Page
#10 Gummed Flap White Envelopes, 100/Box
#10 Self-Seal White Envelopes
#10 White Business Envelopes, 4 1/8 x 9 1/2
#10 - 4 1/8" x 9 1/2" Recycled Envelopes
#10 - 4 1/8" x 9 1/2" Security-Tint Envelopes
#10-4 1/8" x 9 1/2" Premium Diagonal Seam Envelopes
#6 3/4 Gummed Flap White Envelopes
1/7 Cubic Foot Compact "Cube" Office Refrigerators
1/4 Fold Party Design Invitations & White Envelopes, 24 B-1...
12 Colored Short Pencils
12-1/2 Diameter Round Wall Clock
14-7/8 x 11 Blue Bar Computer Printout Paper
2300 Heavy-Duty Transfer File Systems by Perma
24 Capacity Maxi Data Binder Racks, Pearl
24-Hour Round Wall Clock
3-ring staple pack
3.6 Cubic Foot Counter Height Office Refrigerator
36X48 HARDFLOOR CHAIRMAT
3D Systems Cube Printer, 2nd Generation, Magenta
3D Systems Cube Printer, 2nd Generation, White

6. Product ordered greater no of times



Product Name

Product Name
"While you Were Out" Message Book, One Form per Page
#10 Gummed Flap White Envelopes, 100/Box
#10 Self-Seal White Envelopes
#10 White Business Envelopes, 4 1/8 x 9 1/2
#10- 4 1/8" x 9 1/2" Recycled Envelopes
#10- 4 1/8" x 9 1/2" Security-Tint Envelopes
#10-4 1/8" x 9 1/2" Premium Diagonal Seam Envelopes
#6 3/4 Gummed Flap White Envelopes

Sales

2.3M
Sales

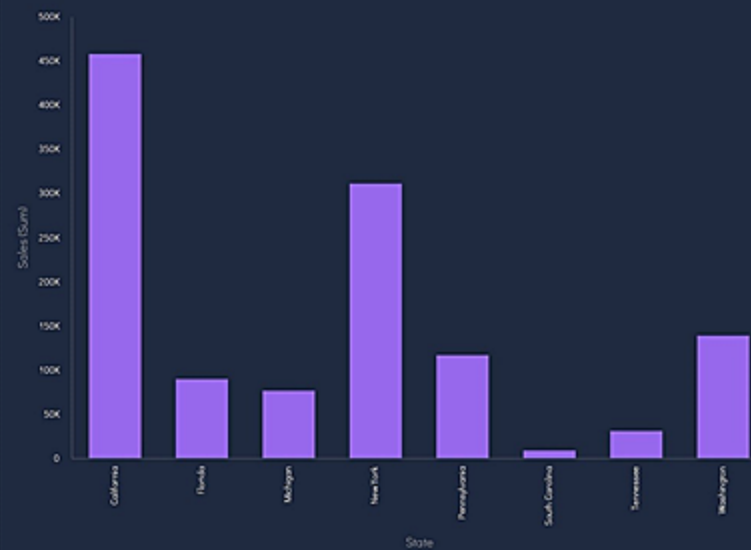
7. Sales by state

2.3M
Sales

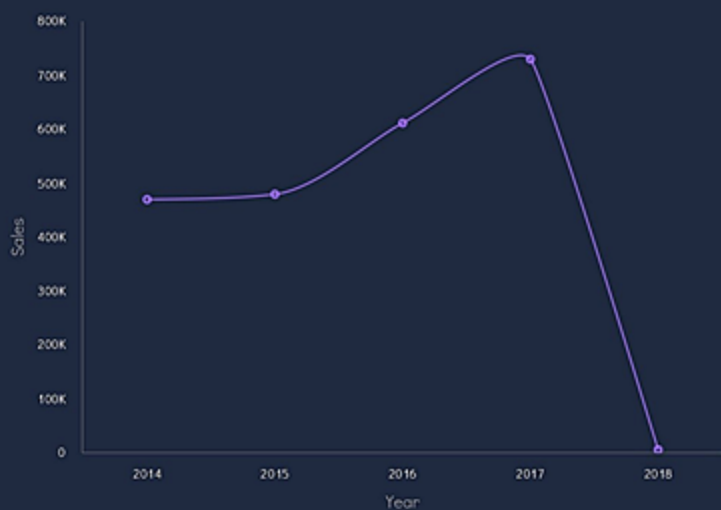
State regions



Sales by State



8. Forecasting future sales according to year



Year

Year
2014
2015
2016
2017
2018

Sales

2.3M
Sales

Profit in year



Month

Month
April
August
December
February
January
July

9. Trend in profit over time



Advantages:

1. We have to spend lots of time on analysing data manually, this tool helps us in time consumption
2. These colorful pictorial representations helps in easy understanding and makes one feel pleasant while go throwing the data
3. Forecasting inventory for the next season
4. Lets us know customers better

Applications:

Analytics plays a vital role in the development of e-commerce which decides everything. It isn't that complicated to sort out online marketing. In the end, it's all about finding your customer requirements. Ecommerce market research is just gathering information to analyze what your potential customer exactly needs. Concerning analytics, research gives an idea of the quantitative and qualitative notions behind why people buy a particular product or service. from optimizing the CTA to the traffic on the website. Analytic tools differ with their accessibility, price, complexity, etc. there are various e-commerce tools available that depict your data the way you wanted it to look and help you get more customers independent of organic traffic, social media, or email marketing.

Conclusion:

It isn't that complicated to sort out online marketing. In the end, it's all about finding your customer requirements. Ecommerce market research is just gathering information to analyze what your potential customer exactly needs. Concerning analytics, research gives an idea of the quantitative and qualitative notions behind why people buy a particular product or service.

Future scope:

Massive growth of population has lead to increase in e-commerce business, where our recommendation engine has the strongest contribution. Scope of e-commerce is too wider in future because majority of the people are purchasing products from online. Predictive analysis can boost up e-commerce. This will rise the sales percentage of the store and this is also a way of marketing. This is also used for promoting the future e-commerce business