DHL Logistics Facility Data Analytics Using IBM Cognos Analytics

Project Report

Submitted by:-

- Dheeraj Mukati(21MCA10129)
- Rewti Raman(20BCE10175)
- Harsh Kumar Chandravanshi(20BCE10778)
- Jalaj Varshney(18BCE10124)

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INTRODUCTION

Overview

This project is to Analyse and Visualize DHL Logistics Facility Data. Using the DHL Analysis dataset, we plan to create a dashboard showing the sales and profits for different segments and Sub-Category of products across all the countries.

The data we worked on had the following features:

Sr. no.	Row ID	Sr. no.	Row ID
1	X	10	Y
2	OBJECTID	11	FEATURE_ID
3	NAME	12	ADDRESS
4	ADDRESS2	13	CITY
5	STATE	14	ZIP
6	LATITUDE	15	LONGITUDE
7	MATCH_STATUS	16	PLACEMENT
8	CENSUS_CODE	17	LAST_PICKUP
9	LOCATION_TY	18	LOCATION_TH

Table 1.1

PURPOSE

To create data visualization charts like those mentioned below:

- ➤ City-wise No of Pickups made
- ➤ City-wise No of Objects serviced
- ➤ State-wise No of Cities, where DHFL Services are provided
- ➤ Total Number of Objects IDs Serviced by DHFL - Summary Card
- ➤ Zip Code wise Number of Objects Serviced
- ➤ Location Type Filters
- ➤ Placement Filters
- ➤ Mach Status Filters
- ➤ Location Ty Filters
- ➤ Location Th Filters
- ➤ Top Contributor Countries / Cities - Geo Map display

LITERATURE SURVEY

EXISTING PROBLEMS

- If we are finding unusual patterns within our data analysis or our statistical significance is not strong sufficient, we might not have sufficient data to make valid conclusions
- Without doing data analysis, we won't get the opportunity to evaluate the data before making actionable plans
- Data is meaningless without context and without context, we cannot turn data into information
- Information is useless without being able to apply to something

PROPOSED SOLUTIONS

- To create various data visualizations using IBM Cognos
- To make a dashboard using IBM Cognos
- Making dashboards can revolutionize both our success and enjoyment in running our business

THEORETICAL ANALYSIS

BLOCK DIAGRAM

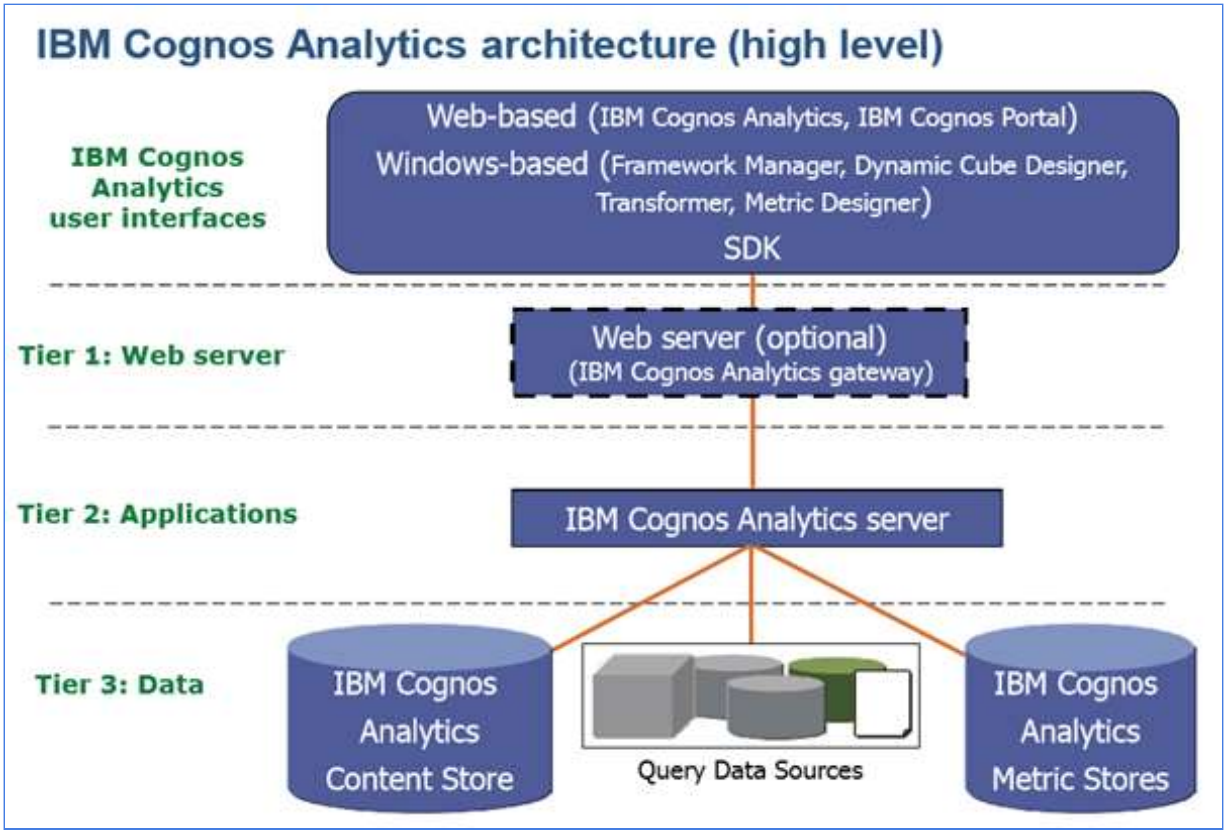

fig 3.1

FLOWCHART

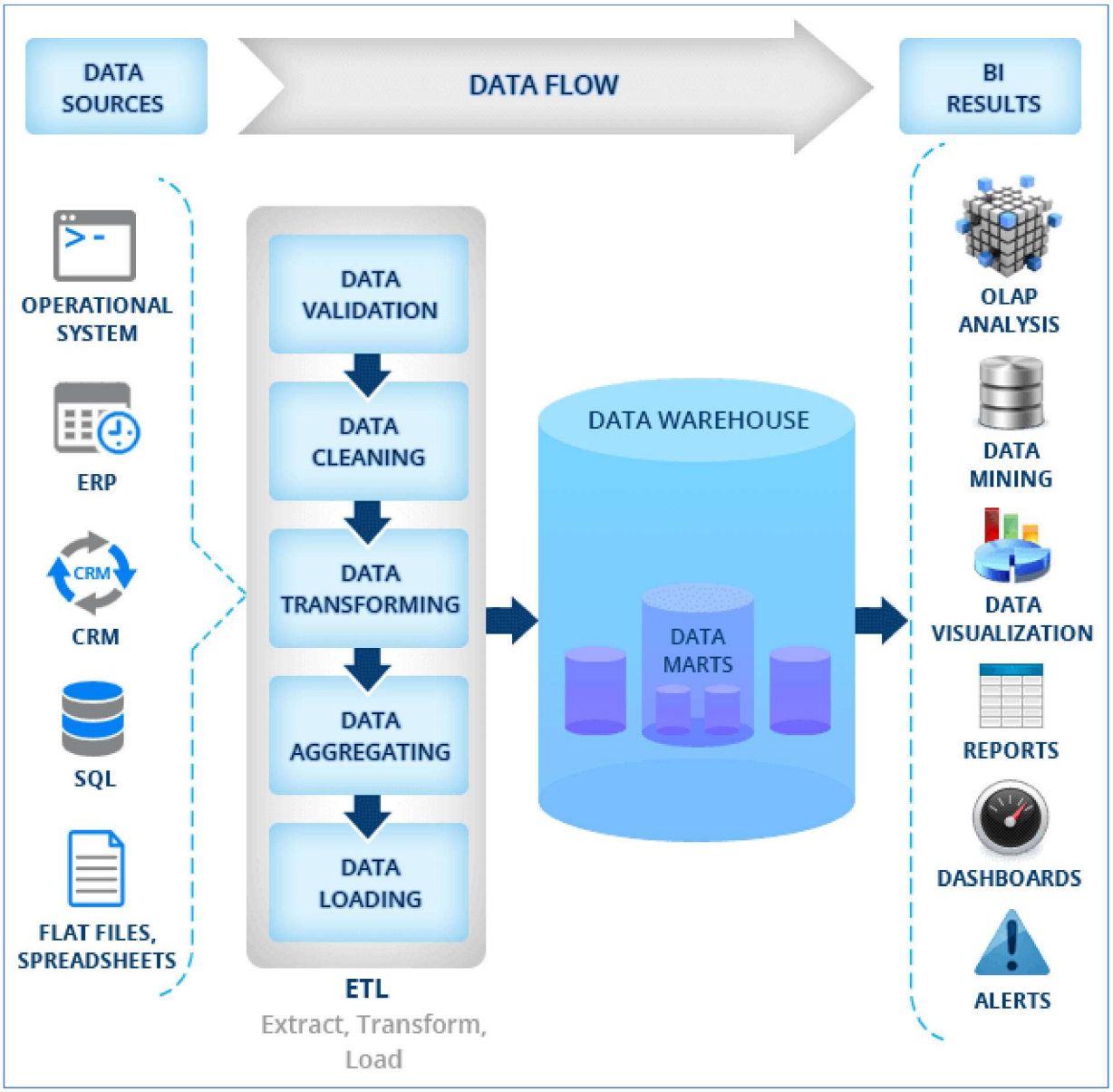

Fig 4.1

RESULT

1) City-wise No of Pickups made

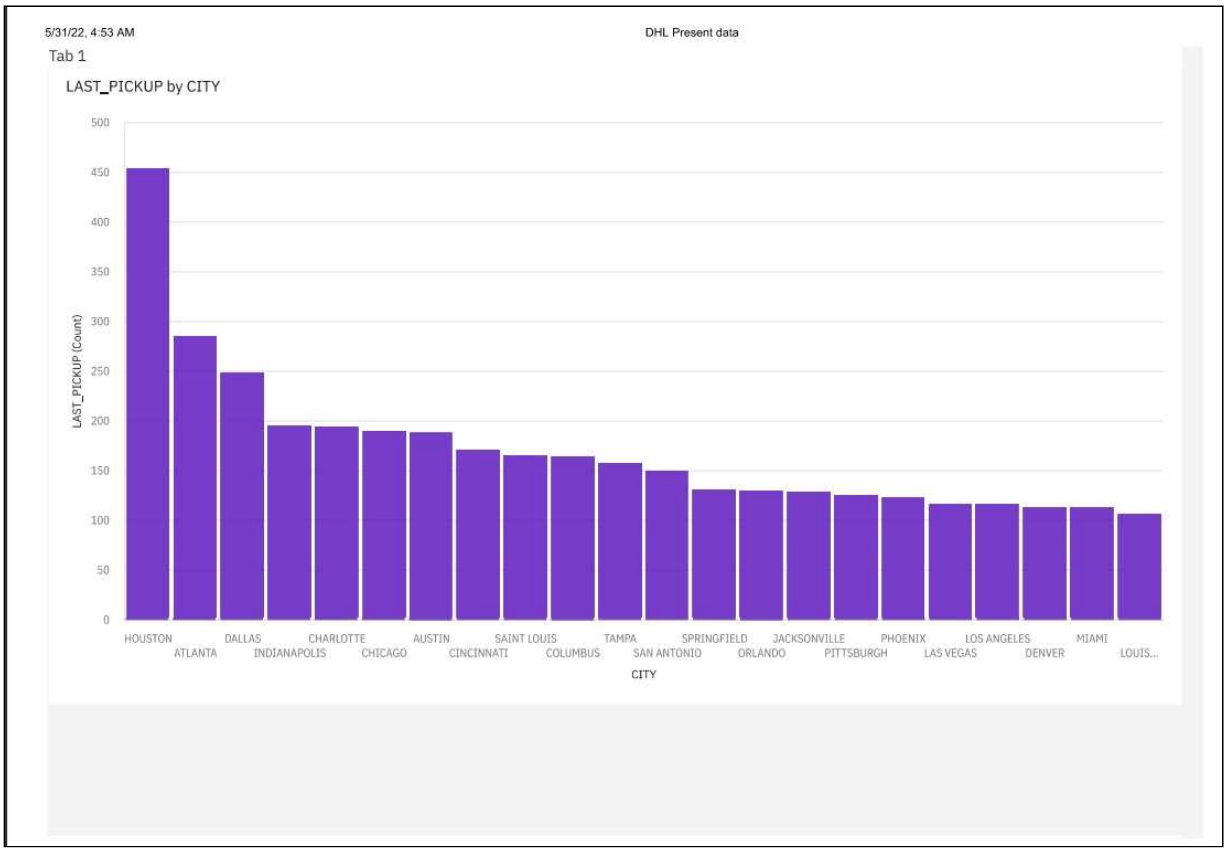

Fig. 5.1

2) City-wise No of Objects serviced?

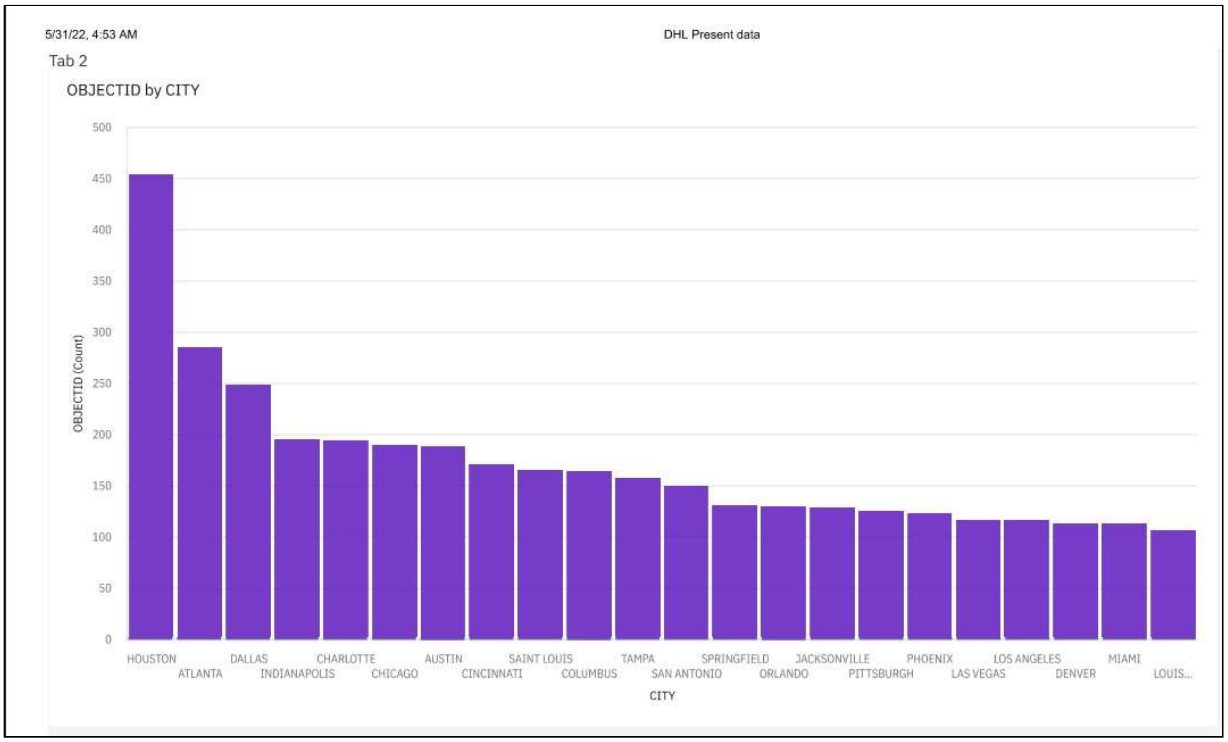

Fig 5.2

3) State-wise No of Cities, where DHFL Services are provided

STATE	CITY	OBJECTID
TX	LUFKIN	7
	TEXARKANA	7
	VICTORIA	7
	ALLEN	6
	KINGWOOD	6
	LEAGUE CITY	6
	COLLEYVILLE	5
	EULESS	5
	HURST	5
	KERRVILLE	5
	KILLEEN	5
	ODESSA	5
	PARIS	5
	ROCKWALL	5
	WEATHERFORD	5
	ADDISON	4
	BOERNE	4
	EDINBURG	4

Fig 5.3

4) Zip Code wise Number of Objects Serviced

Fig 5.4

5) Location Type Filters

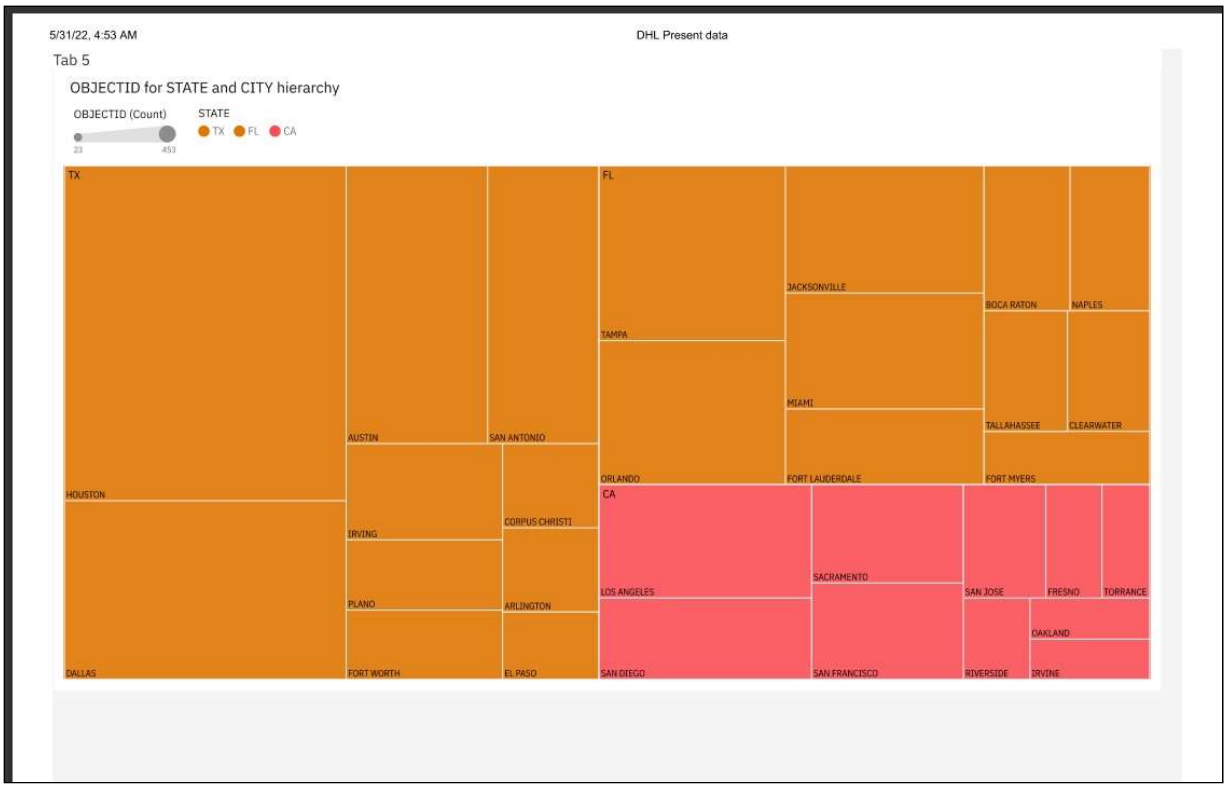

Fig 5.5

6) Placement Filters

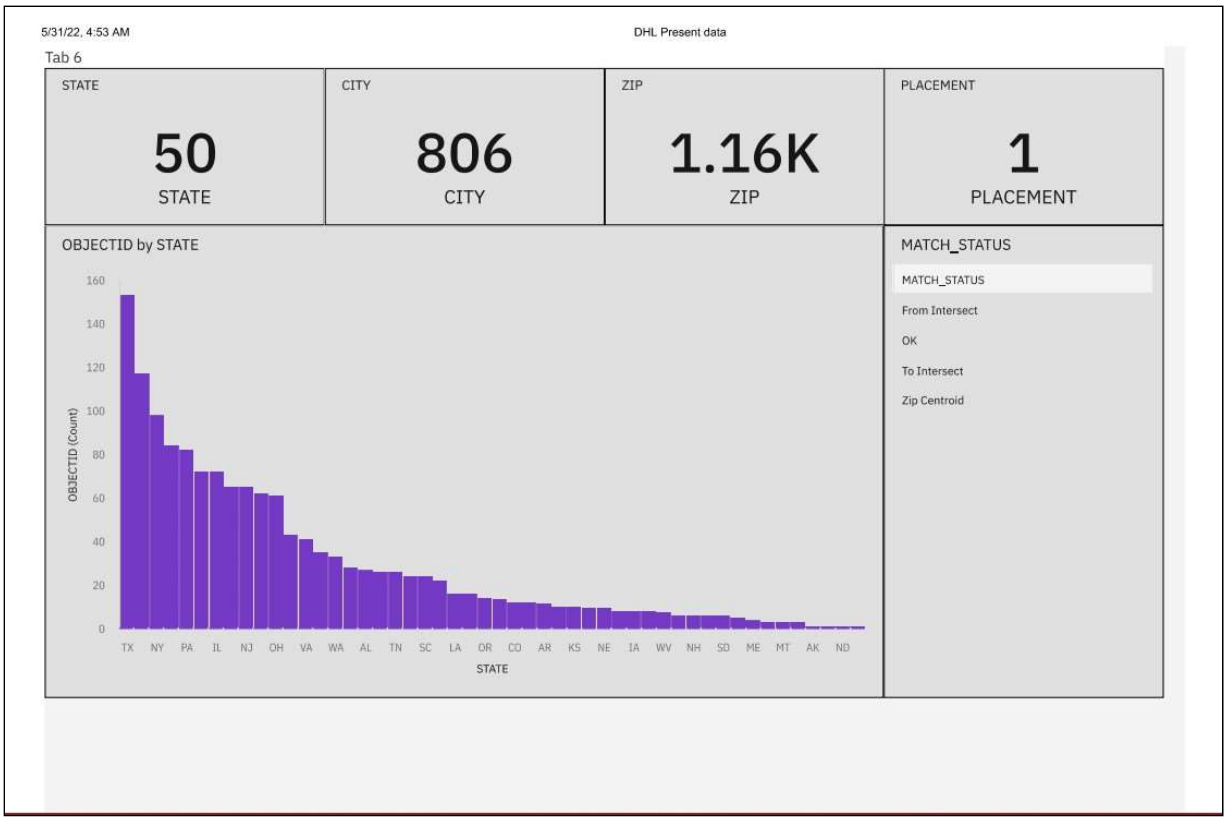

Fig 5.6

7) Mach Status Filters & Location Ty Filters & Location Th Filters

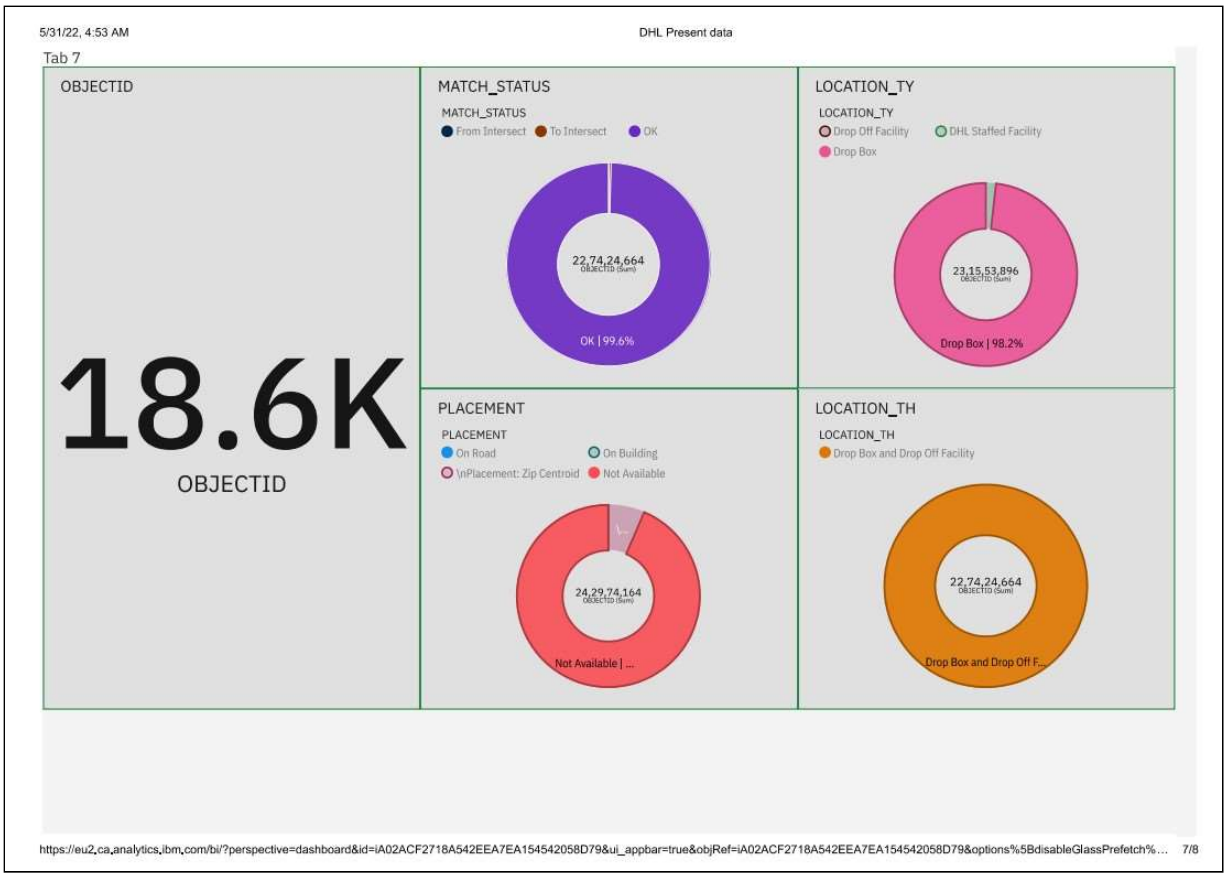

Fig 5.7

8) Top Contributor Countries / Cities? - Geo Map display

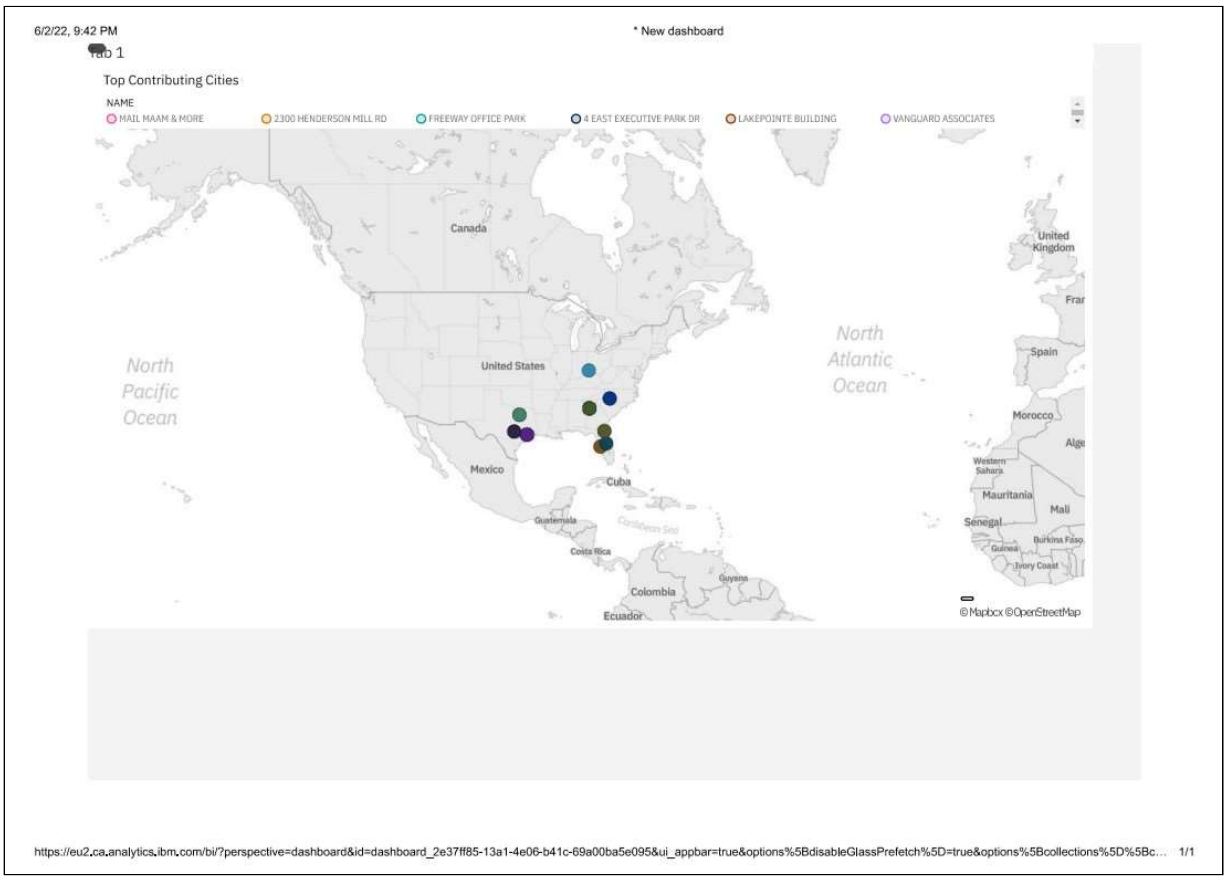

Fig 5.8

ADVANTAGES AND DISADVANTAGES OF CREATING DASHBOARD

ADVANTAGES

1. **Enhanced Visibility:** Dashboards provide greater visibility with information available whenever it is required to ensure businesses are better placed to respond to changing market conditions

2. **Timesaving Efficiency:** With dashboards, we are no longer wasting valuable time generating reports from multiple systems. Instead, data is drawn from a source and displayed as an easy to interpret visual overview

3. **Better Forecasting:** With greater insight into the data, future demand can be more accurately predicted using historic information. Businesses can be more effectively planned for demand fluctuations, setting measurable goals and deliverables for greater success

4. **Better Decision Making:** Whether you're providing reporting and analysis for the entire organization or functional areas of the business, a dashboard allows companies to analyze key data quickly and meticulously. Visualized interactivity serves to deliver overwhelming amounts of data in a way that is easy to understand. With the ability to easily identify what the data really means better decisions can be made relevant to the business.

DISADVANTAGES

1. Flashy or cluttered design, with users attempting to incorporate too much information without understanding constraints or considering their specific needs from the range of different measurables detailed data analysis provides.

2. The technology used in the development of dashboards differs from other software solutions already employed in organizations and can be initially difficult to understand.

3. The business has no predetermined rules and hierarchies for how dashboard metrics are used.This means each employee can use the metrics in different ways, resulting in a diverse set of data being reported.

APPLICATIONS

1. If you manage complex campaigns, you usually end up having several analytics solutions for each platform and needing to consult them separately, which hinders the overall view. Instead, the dashboard displays data from different sources, like web analytics solutions, social media metrics. This way makes it much easier to compare them and see how they develop.

2. A good dashboard clearly shows you many key metrics so you don't need to be an analytics expert to understand them. If you want to look further into a particular data set, you always have the option of employing more specific tools.

3. If you synchronize your dashboard automatically in the cloud, you can create different users so that your entire team can access the same information from anywhere. It's even possible to project the dashboard onto a screen in your office so that the whole team can see what is going on in real-time.

4. Having a centralized dashboard will save you a lot of time. Instead of collecting data from different sources and making charts on your own, dashboards do all this work for you. You just need to invest some time, in the beginning, to set up the metrics and decide how to present them. From that point on, the reports are created automatically.

DASHBOARD

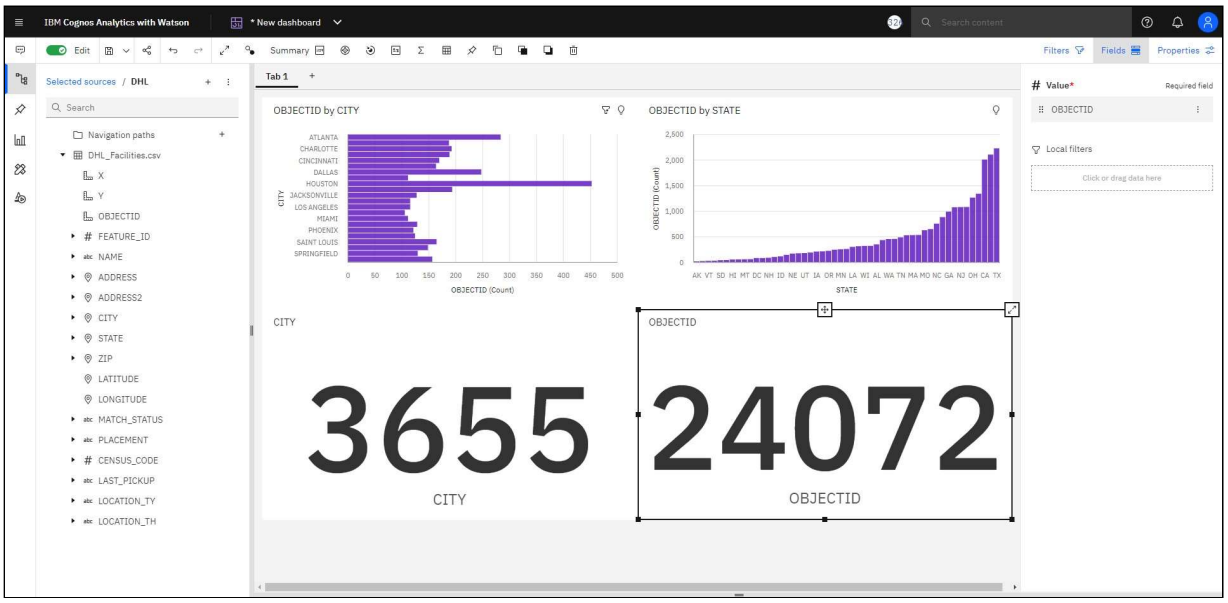

Fig 8.1

CONCLUSION

This way, with the help of diagrams, graphs, and maps we can understand given data. This understanding of data allows us to ask the right questions to reach our desired goals by optimizing methods. With this project, we learned how to upload and prepare data. We also statistical concepts which helped in calculations and plotting of graphs and maps to make a dashboard.