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# Create Data Visualization in Cognos BI with Snapchat Ads Data

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**ABSTRACT:** In recent years there has been a growing public concern to the amount of personal data that social media sites collect. This data can benefit us as a consumer through targeted advertisement of products. However, it is important that the public are aware of biased ads that may target them. In this Project using the service IBM Cognos Analytics we will know fundamental concepts and can work on IBM Cognos Analytics, gain a broad understanding of plotting different graphs and we will be able to create meaningful dashboards to create powerful and professional visualizations that explain the story of our data, it is a self-service report authoring and also protects the data from misuse.

**KEYWORDS:** IBM Cognos Analytics, Dashboards, Visualizations.

## I. INTRODUCTION

### 1.1 Artificial Intelligence

Computerized reasoning use PCs and machines to emulate the problemsolving and dynamic abilities of the human psyche. John McCarthy characterized AI as "It is the science and designing of making shrewd machines, particularly savvy PC programs. It is connected with the comparative undertaking of utilizing PCs to figure out human knowledge, yet AI doesn't need to restrict itself to strategies that are naturally recognizable".

Simulated intelligence is rethinking the manner in which business processes are completed in different fields, like promoting, medical care, monetary administrations, and that's only the tip of the iceberg. Organizations are persistently investigating the manners in which they can receive rewards from this innovation. As the mission for development of current cycles keeps on developing, it's a good idea for experts to acquire skill in AI. A portion of the AI strong applications are Apple's Siri, IBM Watson and Amazon's Alexa.

### 1.2 Data Analytics

Information examination is the study of dissecting crude datasets to determine an end in regards to the data they hold. It empowers us to find designs in the crude information and draw important data from them. Information examination assist associations with amplifying market effectiveness and work on their income.

Benefits of Data Analytics

1. Decision making improves.
2. Marketing becomes more effective.
3. Customer Service improves.
4. The efficiency of operation increases.

### 1.3 Business Intelligence

An umbrella term of the innovation that empowers information planning, information mining, information the board, and information representation. The apparatuses and processes permit end clients to recognize significant data from crude information, working with information driven decision-production inside associations across different ventures. BI devices help business clients in examining execution measurements and extricating experiences continuously. They center around self-administration capacities, diminishing IT conditions and empowering choice imprints to perceive execution holes, market patterns, or new income valuable open doors all the more rapidly

Major Features:

*a) Data Integration*

- An association needs information that comes various sources and record designs.
- Information ought to be extricated from various source or from various servers or data sets.
- This is coordinated into one standard configuration in like manner arranging region.

*b) Data Processing*

- Coordinated information is as yet not ready for representation and in pre-handled expulsion of repetitive qualities, missing qualities and is cleaned.

*c) Data Presentation*

- Dashboard and report assists with addressing information all the more instinctively.
- Visual report assists business with finishing clients to take business choice in light of the experiences.

#### 1.4 IBM Cognos Analytics

IBM Cognos is a business knowledge instrument for online revealing and examination. IBM Cognos Analytics is a bunch of business knowledge instruments accessible on cloud or onpremise. The essential center is in the space of unmistakable examination, to assist clients with seeing the data in your information through dashboards, proficient detailing and self-administration information investigation.

Features of Cognos Analytics:

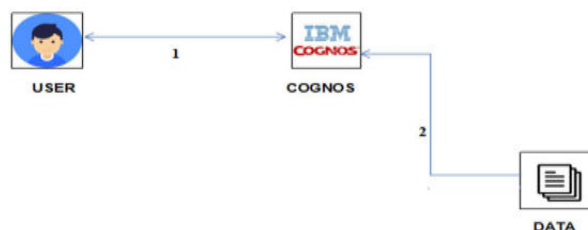
- 1.4.1 Connect our data effortlessly.
- 1.4.2 Prepare our data.
- 1.4.3 Build visualization.
- 1.4.4 Identify patterns.
- 1.4.5 Generate personalize reports.
- 1.4.6 Gain insights.
- 1.4.7 Stay connected

## II. RELATED WORK

The use of BI devices by SMEs has been the subject of concentrates before. In any case, such examinations have not used a meaning system to assess the meaning of BI device highlights. This segment of the article presents the hypothesis of the meaning system. The five classes of importance are right off the bat laid out through a writing survey of the assumed pertinence of a BI device with regards to SME business direction, the anticipated worth as far as SME's business navigation, the valued signs of the critical elements of IBM Cognos, the apparent worth as according to the viewpoint of SMEs and the created esteem experienced by SMEs.

## III. SYSTEM DESIGN

### 3.1 System Architecture



**Fig1 System Architecture**

Figure 1 shows the system architecture of the project.

### 3.2 Flow Diagram

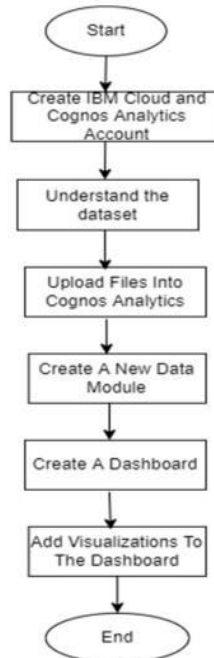


Fig 2: Flow diagram

The figure 2 describes the process flow of the project.

## IV. METHODOLOGY

### 4.1 Description of the project work

The main objective of the project is to know fundamental concepts and can work on IBM Cognos Analytics, to gain a broad understanding of plotting different graphs and should be able to create meaningful dashboards. The project flows as users create multiple analysis graphs/charts, using the analyzed chart creation of Dashboard is done and saving and Visualizing the final dashboard in the IBM Cognos Analytics. To accomplish this, we have to complete the activities and tasks like Working with the Dataset, Understand the Dataset and Building a Data Module in Cognos Analytics.

### 4.2 Steps to be followed

1. Start a browser and enter the following URL to login to IBM cloud student account <https://www.ibm.com/academic/home>.

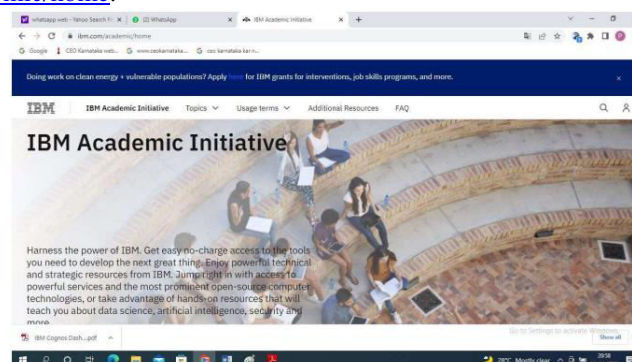


Fig 3: IBM academic Initiative home page



## 2. Select

- Topics
- Data Science

3. Scroll down to go to software on left menu.

4. In software ◇ select cognos analytics cloud trial for students.

5. Click access now.

6. In register now page... ignore and click (Login)

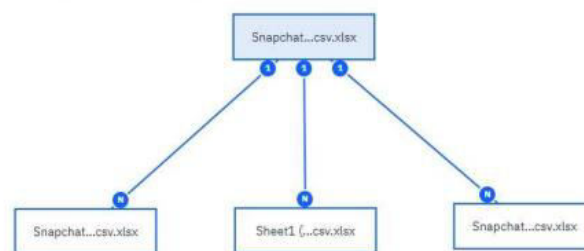
7. Provide the password.

8. You have logged into IBM cloud.

9. Now click on Cognos Analytics on cloud trial for student to launch it.

10. You will be now in Cognos Analytics with Watson. 11. Building A Data Module: In Cognos Analytics, a Data Module serves as a data repository. It tends to be utilized to import outer information from records on premise, information sources and cloud information sources. Numerous information sources can be molded, mixed, scrubbed and consolidated to make a custom, reusable and shareable information module for use in dashboards and reports.

- Uploading data- In this project we have uploaded Snapchat Ads dataset.
- Cleaning data (prepare data).
- Creating new data module



**Fig 4 Creating relationship between the dataset.**

Fig 4 shows the relationship between the dataset to create a new data module.

## 12. Building Dashboard:

In Cognos Analytics, a Dashboard provides users a way to communicate insights and analysis of their data. A dashboard view contains visualizations such as graphs, charts, plots, table, maps, or any other visual representation of data

- Creating Dashboard.
- Analyzing and interpreting (exploration).
- Visualizing data (dashboard creation).

## 4.3 Dataset Description

Brief overview of what each feature represents or should represent

1. Ad Id — Unique Ad id for ads.
2. Country - Country Wise ads run.
3. Gender - Either the male or female are targeting for ads.
4. Language - Which language is used widely while creating ads?
5. Interest - Interest based ads are displayed to you based on information collected from the activities,
6. Age - Targeting the user based on their age.
7. Start Date- Date of starting the ad.
8. End Date- Date of ending the ad.
9. Spend- How much money to spend on the particular ad.

10. Impression- Based on the money spent on ads.

## V. EXPERIMENTAL RESULTS

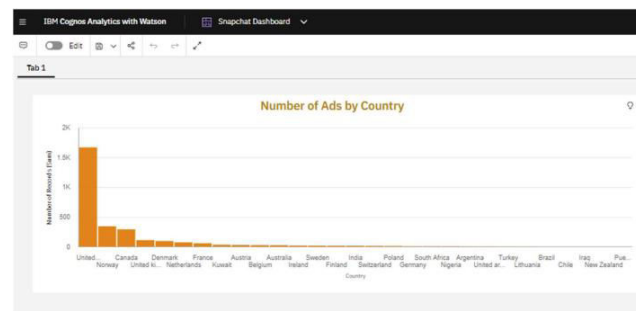


Fig 5: Visualization of Number of Ads by Country

The figure 5 shows the visualization of Number of Ads by Country  
For visualizing the number of ads, we will require the following data

- Country
- Total number of Records From this data a Bar chart visualization is plotted.

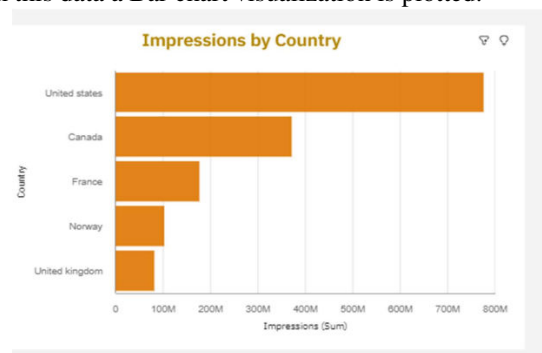


Fig 6: Figure shows the visualization of Impressions by Country

The figure 6 shows that bar chart is plotted to show the impression and spend, based on the countries.

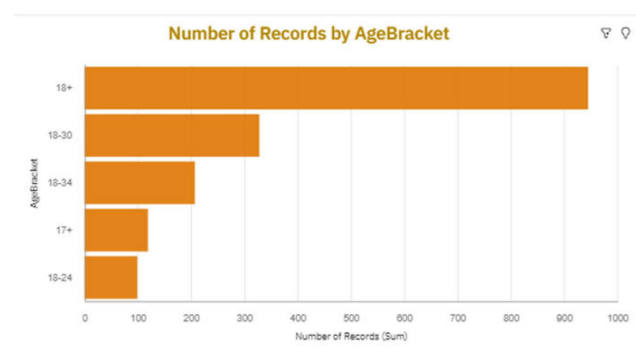


Fig 7: Figure shows the visualization of Number of Records by Age Bracket.

The figure 7 shows that bar chart is plotted to show the age based on the no of records.



**Fig 8: Figure shows the visualization of Impressions, Country and Spend**

The figure 8 In our data we have a country, spend & impression column. So, with the help of these we plot a bar chart for showing number of ads and textual data of country, spend & impression.

## VI. CONCLUSION

In this paper the data can benefit us as a consumer through targeted advertisement of products. However, it is important that the public are aware of biased ads that may target them. We are able to know fundamental concepts and can work on IBM Cognos Analytics, gain a broad understanding of plotting different graphs and are able to create meaningful dashboards. IBM Cognos Dashboard Embedded provides developers the ability to embed a visualization platform directly into their application. We can create powerful and professional visualizations that explain the story of our data and protects the data from misuse. Also it is a self-service report authoring.

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