Youtube Analytics Channel Visualization Results Using Google Data Studio and Klipfolio

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Abstract
Demonstrate the power of Big Data Analytics using Google Analytics as a platform workflow. First open the YouTube channel, then start recording of the channel analytics is done here automatically by Google. This data is exported from YouTube Analytics to Google sheets and then is fed to Google Analytics. After analyzes the data, it is now integrated with Google Data Studio and Klipfolio. Google Data Studio makes use of AI (Artificial Intelligence) insights techniques that can generate artificial intelligence and prediction-based report graphs which can be analyzed by the end user. In the future, not only YouTube, but any Google products or Google service data can be fed to Google Analytics and integrated in Google Data Studio for artificial intelligence based on Big Data Analytics.

Keywords: Big Data Analytics, YouTube, Google Sheets, Google Analytics, Google Data Studio

INTRODUCTION
Big data deals with data sets that are too large or complex to be dealt with by traditional data-processing application software. Traditional databases offer greater statistical power, while data cubes and data with higher dimensions may lead to a higher false discovery rate. Big data includes capturing data, data storage, data analysis, search, sharing, transfer, visualization, querying, updating, information privacy and data source, these are some attributes of big data. Big data has the following characteristics like volume, variety, and velocity. Therefore, big data involves data with sizes that exceed the capacity of traditional software to process within an acceptable time and value. Big Data analytics, refer to the application of analytics principles to Big Data, to make better business intelligence and proper result outcomes from the examined data or data sets.

Review of literature, The literature is based on IEEE papers that deal with Big Data Analytics.
on the Google platform. In the literature view, the boom for market due to Big Data Analytics is reviewed. Also, how Google Analytics products are making these dreams come true. The literature on the recent Hadoop platform, by Google is also discussed. Using these technologies, Big Data Analytics is possible in a simpler and efficient way.

**Problem definition**, The data analytics here, is restricted to Google account holders and those who want the analytics of the Google data.

Therefore, in this project, we aim to implement the big data analytics principles to a sample big data platform based on YouTube.

**Scope of the problem**, In the present scenario only YouTube Analytics is discussed, where the users need a Google and YouTube account.

**METODE**

**System Block Diagram**

As explained in the figure 3.0, first we go to YouTube, then click YouTube Studio, after that click Analytics to see the Channel analytics. Then we export this data into Google Analytics in the form of Google sheets. This is given as input to Google data studio, where the AI analytics report is generated. Make AI analytics to generate graphs and analytics report finally.

![Figure 1. System Block Diagram Analytics](image-url)
**Implementation**

YouTube Application Programming Interface (YouTube API) allows developers to access video statistics and YouTube channel data via two types of calls, REST and XML-RPC. Google describe the YouTube API Resources as "APIs and Tools that let you bring the YouTube experience to your webpage, application or device." The Players and Player APIs section identifies ways you can let your users watch YouTube videos in your application and control the playback experience. With an embedded YouTube player, you can integrate the YouTube video playback experience directly in your web page or application. You can use player parameters to customize the player's appearance, and you can also use Player APIs to control the player directly from your web page or app.
Google Analytics and Google Data Studio

When the YouTube data is fed into Google Analytics platform, figure 5., is the first analytics that Google shows. It shows my lifetime history, the various traffic modes that we used to view the videos and the various impressions from the audience.

RESULTS AND DISCUSSION

This showing my original YouTube Analytics reports derived.
On the figure 7. is my usage history from 2014 to 2023. It shows a pie chart and line chart representation of the total time statistics that how the viewers find my channel on YouTube

![Figure 7. YouTube Analytics Report](image)

The figure 8. is my lifetime Subscribers history. Based on the Content Type, indicating most of my video viewing types from Videos (video that I uploaded), Live Stream videos, Others (like VODs an archive of content previously streamed live on Twitch export to YouTube) and Shorts (videos that only have 15s duration) each types have average views chart.

![Figure 8. YouTube Analytics Subscribers Report](image)

On the figure 9., most of the traffic source statistics were related to YouTube API’s available. Some data was also accessed through a third-party service (30.8%), that was acquired earlier and the remaining was related to subscriptions.

![Figure 9. YouTube Analytics Traffic Report](image)
On the figure 10. shows YouTube data videos was also viewed on other devices that belonged to Desktop, Mobile, Tablet, TV.

And on this figure 11. can be seen that many people using Mobile device to watched videos on my YouTube channel then following by Desktop (Laptop/PC), Tablet and TV.

On the figure 12. it have shows that how YouTube data can be views by playback location over time (daily). Here the result can be seen.

On this figure 13. shows how YouTube data was also viewed by typical views like from Live streams, Videos that i uploaded and Shorts. The statistical data is shown for Top performing videos and Bottom performing videos.
CONCLUSION

The activities history of the entire YouTube analytics data were included. Then all the data imported to Google Data Studio through Google Analytics. Then through AI (Artificial Intelligence) work and insights, the corresponding reports on YouTube analytics was created and analyzed using Google Data Studio. Future work, Google Data Studio is a very powerful tool, using it not only YouTube, but any Google product and Supported platforms. Data can be analyzed and the result of corresponding AI insights reports can be created. That is the future scope and the usefulness of this experiment.

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