

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 work flow. 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

Abstrak

Mendemonstrasikan kekuatan Big Data Analytics dengan menggunakan Google Analytics sebagai alur kerja platform. Pertama-tama buka saluran YouTube, lalu mulai merekam analisis saluran yang dilakukan di sini secara otomatis oleh Google. Data ini diekspor dari YouTube Analytics ke lembar Google dan kemudian diumpankan ke Google Analytics. Setelah menganalisis data, data tersebut sekarang terintegrasi dengan Google Data Studio. Google Data Studio memanfaatkan teknik wawasan AI (Artificial Intelligence) yang dapat menghasilkan kecerdasan buatan dan grafik laporan berbasis prediksi yang dapat dianalisis oleh pengguna akhir. Di masa depan, tidak hanya YouTube, tetapi semua produk Google atau data layanan Google dapat diumpankan ke Google Analytics dan diintegrasikan dalam Google Data Studio untuk kecerdasan buatan berbasis Big Data Analytics.

Kata Kunci: Data Analytics, YouTube, Google Sheets, Google Analytics, Google Data Studio.

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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.

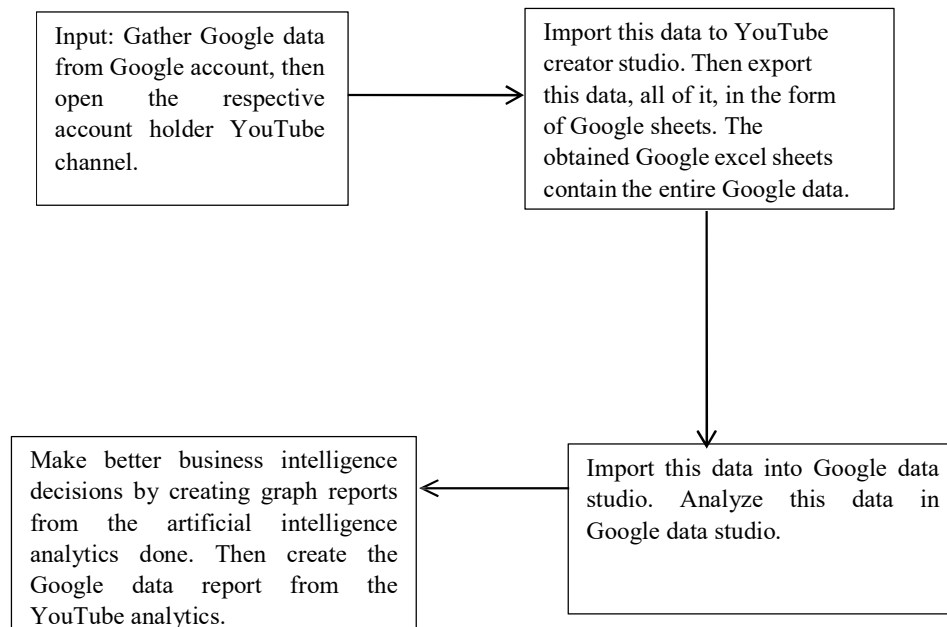


Figure 1. System Block Diagram Analytics

Content	Video title	Video publish time	Views	Watch time (hours)	Subscribers	Impressions	Impressions click-through rate (%)
Total			160091	4005 4356	1453	1336668	8.33
qYVOZxbWxU	230604 SNSD Tiffany Hyeoyeon Sooyoung Yoon at Taeyeon concert The ODD of LOVE day 2 KSPD DOME Seoul	Jun 4, 2023	26395	719 2727	22	299273	7.34
82uIHZCAw0	GENSHIN IMPACT Equivalent Exchange helped Fatui Viktor gets more Harbingers Info & about SIGNORA	Oct 10, 2020	18870	181 2027	5	56999	25.21
SK9pkYA8DU	GENSHIN IMPACT Wolvendom full quest, meet RAZOR, fight and open Boss wolf Lupus Boreas / Andrius	Oct 3, 2020	14190	392 251	18	56665	18.62
CyugYvRvdo	230603 Siren - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	6640	117 7195	4	64211	9.02
pgVrkq7ybus	230603 Weekend - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	5510	97 2693	4	60521	8
u6ZqMBx4m6E	GENSHIN IMPACT Snapshots 'Deliver the Picture to Costumer' give to Tea Master Liu Su & Granny Shan	Dec 28, 2020	4790	80 5062	6	18729	21.5
1Dg-AmUbo	230604 Siren - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 2	Jun 4, 2023	4244	75 652	2	52895	6.88
yTZE-JzWwC	230419 Tiffany Young Instagram Story - PEAK TIME Fn B Kyulyun, Moonbyul, Jay Park, Beatburger Jae	Apr 19, 2023	3379	18 0795	1	23103	9.38
QRxELjpbYF40	230603 Some Nights - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	3306	52 8052	2	42370	6.77
Yh0LzCzqgHE	GENSHIN IMPACT 'a date' Dating with LISA (girl x girl)uri	Sep 30, 2020	2993	82 8175	5	19938	10.87
WUhdudclQY	Kiara special req to Cali @ her Birthday 230404 TAKAMORI momdad holoMyth HoloIveEN#happymoriday	Apr 4, 2023	2495	59 8125	0	29091	6.27
TenusKQqX4	230603 Better Babe - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	2411	46 9589	0	31731	6.44
RyDUJpKtWU	230603 Something New VCR - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	2343	38 2767	0	29660	6.69
RXyyM4ZQzhk	230405 Tiffany Young Instagram story #GirlsGeneration #SNSD #소녀시대 #GGAEVA	Apr 5, 2023	2185	5 1201	4	1379	4.93
GLWUNz4H8	230610 Spak, Stress, I - Taeyeon concert The ODD of LOVE at AsiaWorld Arena Hong Kong	Jun 10, 2023	2090	32 7835	2	21958	8.08
cfYkZsMhQpA	TaeNy is LOVE 🍀 230604 Tiffany & Taeyeon @ The ODD of LOVE con backstage #SNSD #girlsgeneration	Jun 5, 2023	1945	6 8095	2	7246	6.85
VUUR5qMxuw	iPhone 12 Mini GENSIN IMPACT All Graphics Setting with 30 FPS or 60 FPS and No Fan with Gameplay	Jan 28, 2021	1597	33 8053	4	7549	17.86
NqdrRQqMxuw	230603 I - Taeyeon concert The ODD of LOVE at KSPD DOME Seoul day 1	Jun 3, 2023	1578	18 5156	0	22602	6.04
eaY9v8Wmg	GENSHIN IMPACT Of the Land Amidst Monoliths quest meet NINGGUANG, CHILDE, XIAO cut	Oct 7, 2020	1437	12 8546	0	2435	11.95
CXvcBxKwks	GENSHIN IMPACT Five Flushes of Fortune 210204 Day 2 - Photo subject today is Blue Creature	Feb 3, 2021	1365	45 0762	2	9996	10.94
tmKp1Pzqs	GENSHIN IMPACT Darknight Hero's Crisis assisting and mission with DILUC together Playing Diluc	Oct 4, 2020	1334	35 3486	1	6359	17.53
Nk35uXBBIM	HD TaeNy cut @ Soshi Tam Tam 소시탈담 teaser making bts 220624 - @GIRLSGENERATION 소녀시대 comeback	Jun 24, 2022	1227	21 262	2	14965	6.9

Figure 2. Shows the Data on Google Sheets

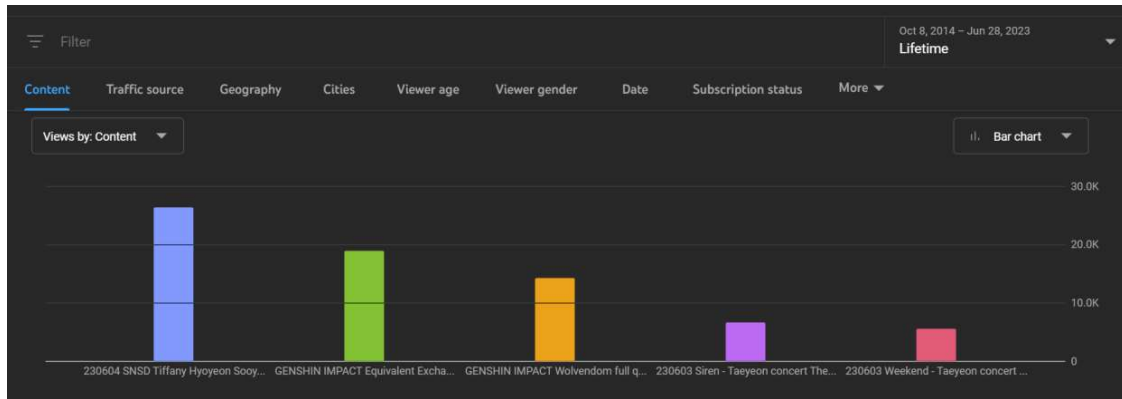


Figure 3. Shows the YouTube Analytics Lifetime Bar Chart

Implementation

YouTube Application Programming Interface (YouTube API) allows developers to access video statistics and YouTube channels 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. Figure 4. shows the YouTube channel.

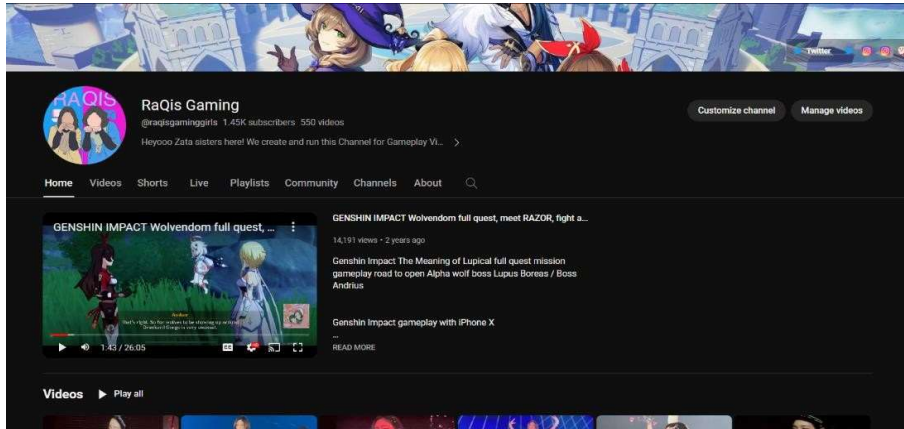


Figure 4. My YouTube Channel

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.

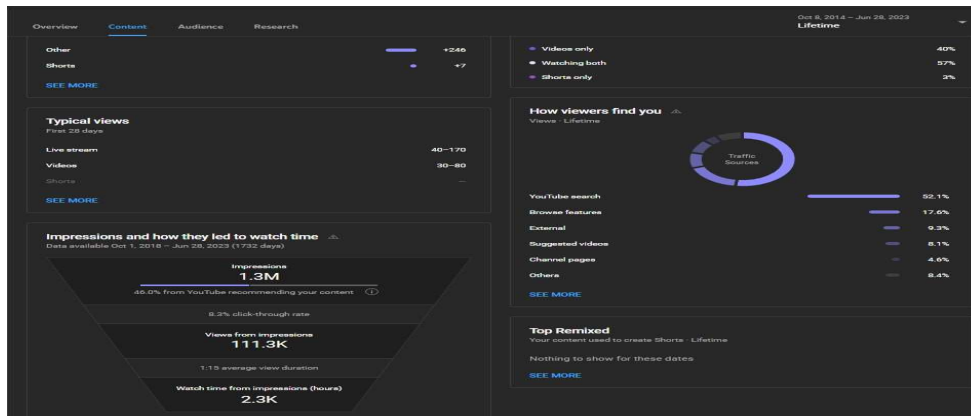


Figure 5. Channel Analytics Dashboard

RESULTS AND DISCUSSION

This showing my original YouTube Analytics reports derived.

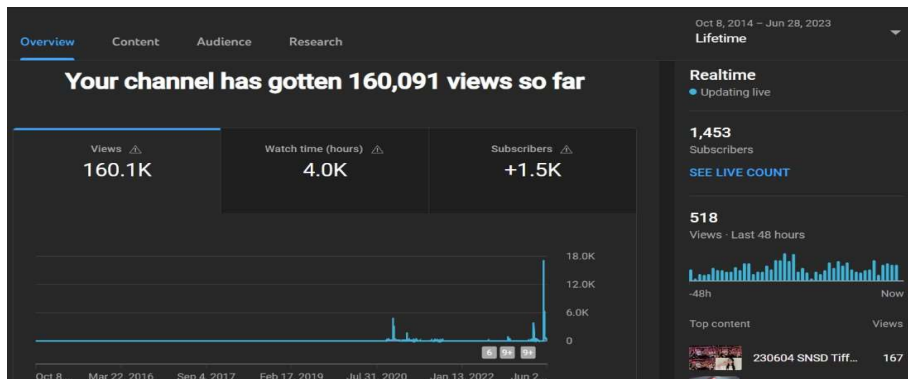


Figure 6. YouTube Analytics Overview Report

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

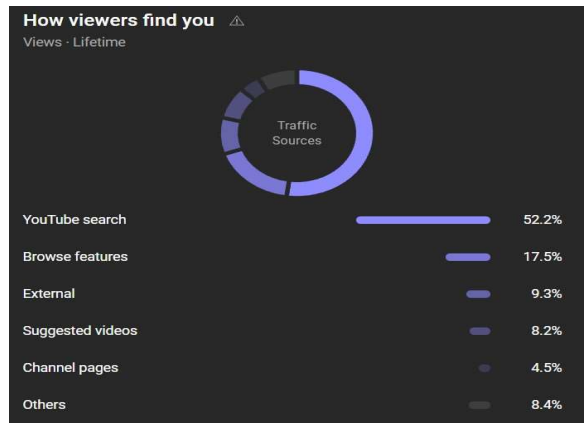


Figure 7. YouTube Analytics Report

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

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.

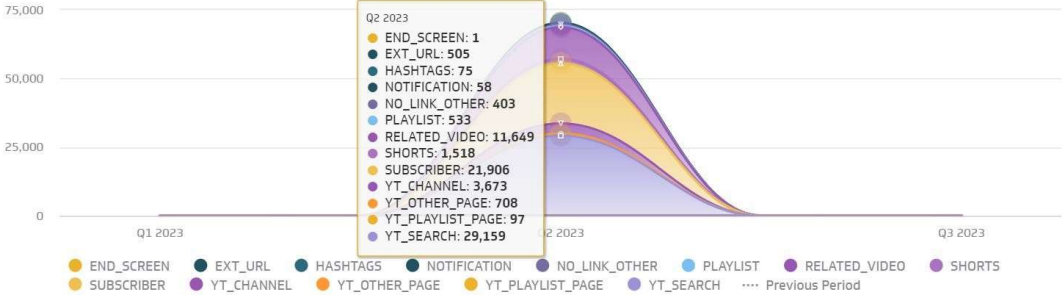


Figure 9. YouTube Analytics Traffic Report

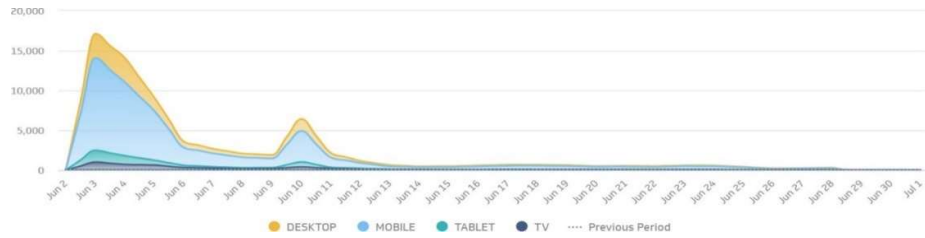


Figure 10. YouTube Analytics Video Views by Device Report

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.

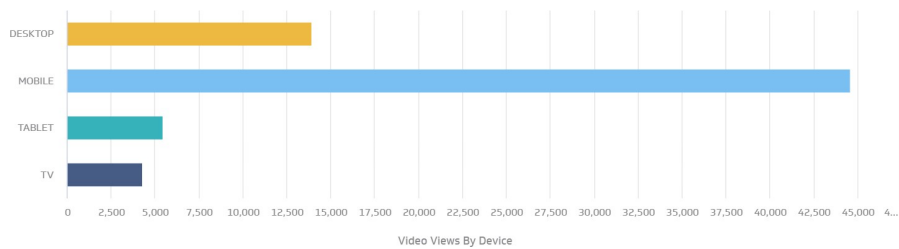


Figure 11. YouTube Analytics Views by Device Types Report

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.

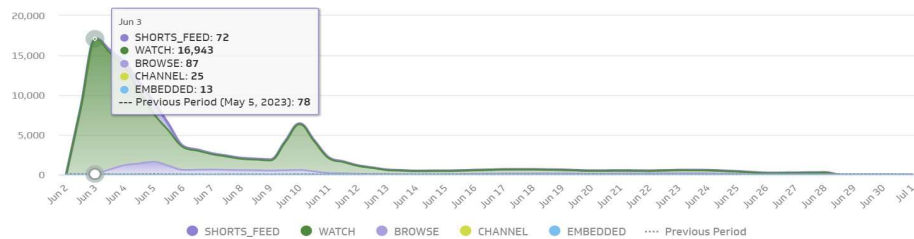


Figure 12. YouTube Analytics Playback Location Report

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.

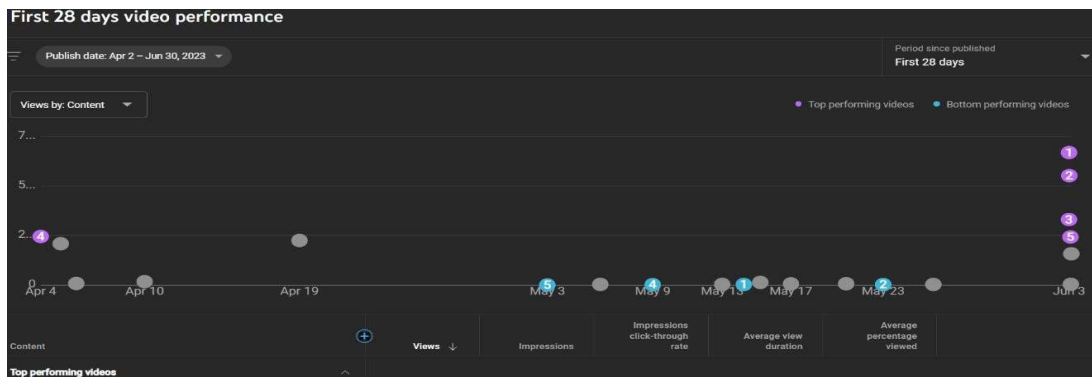


Figure 13. YouTube Analytics Typical Views Report

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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