**Data Analytics Portfolio: Insights into UK's Top YouTube Channels for Marketing Campaigns**



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# 1. Objective

What is the key pain point?

To strategize influencer marketing campaigns for the remainder of 2024, the Head of Marketing is seeking to identify the most prominent YouTubers of the year thus far.

What is the ideal solution?

The optimal approach would be to develop a dashboard that offers comprehensive analytics on the leading UK-based YouTubers in 2024, featuring key metrics such as their:

* subscriber count
* total views
* total videos, and
* engagement metrics

This will help the marketing team make informed decisions about which YouTubers to collaborate with for marketing campaigns.

**User story**

As the Head of Marketing, I require a dashboard that analyses YouTube channel data specific to the UK market. This dashboard should empower me to pinpoint the top-performing channels based on key performance indicators such as subscriber count and average viewership. By leveraging these insights, I can make well-informed decisions regarding the most suitable YouTubers to collaborate with, thereby maximizing the effectiveness of each marketing campaign.

# 2. Data Source

To accomplish our objective, we need access to data on the leading UK-based YouTubers in 2024, encompassing the following information:

* Channel names
* Total subscriber count
* Cumulative video views
* Total number of uploaded videos

The data is sourced from an Excel extract available on Kaggle.

# 3. Stages

* Design
* Development
* Testing
* Analysis

# 4. Design

To align the dashboard with the specified requirements, we need to determine the questions it should address.

## 4.1 Required Dashboard Components

To identify the necessary components, we must first ascertain the questions the dashboard needs to answer:

* Who are the top 10 YouTubers with the most subscribers?
* Which 3 channels have uploaded the most videos?
* Which 3 channels have the most views?
* Which 3 channels have the highest average views per video?
* Which 3 channels have the highest views per subscriber ratio?
* Which 3 channels have the highest subscriber engagement rate per video uploaded?

For now, these are some of the questions we need to answer, this may change as we progress down our analysis.

## 4.2 Dashboard mock-up

Some of the data visuals that may be appropriate in answering our questions include:

* Table
* Tree map
* Scorecards
* Horizontal bar chart

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## 4.3 Tools

|  |  |
| --- | --- |
| Tool | Purpose |
| Excel | Exploring the data |
| SQL Server | Cleaning, testing, and analysing the data |
| Power BI | Visualizing the data via interactive dashboards |
| GitHub | Hosting the project documentation and version control |
| Mokkup AI | Designing the wireframe/mock up of the dashboard |

# 5. Development

## 5.1 Pseudocode

The general approach in creating this solution from start to finish includes but is not limited to the following steps:

* Get the data
* Explore the data in Excel
* Load the data into SQL Server
* Clean the data with SQL
* Test the data with SQL
* Visualize the data in Power BI
* Generate the findings based on the insights
* Write the documentation + commentary
* Publish the data to GitHub Pages

## 5.1 Data exploration notes

This is the stage where you have a scan of what is in the data, errors, inconsistencies, bugs, weird and corrupted characters etc

What are your initial observations with this dataset? What is caught your attention so far?

There are at least 4 columns that contain the data we need for this analysis, which signals we have everything we need from the file without needing to contact the client for any more data.

The first column contains the channel ID with what appears to be channel IDS, which are separated by a @ symbol - we need to extract the channel names from this.

Some of the cells and header names are in a different language - we need to confirm if these columns are needed, and if so, we need to address them.

We have more data than we need, so some of these columns would need to be removed

## 5.1.1. Data cleaning

The aim is to refine our dataset to ensure it is structured and ready for analysis.

The cleaned data should meet the following criteria and constraints:

Only relevant columns should be retained.

All data types should be appropriate for the contents of each column.

No column should contain null values, indicating complete data for all records.

Table 1 table outlining the constraints on the cleaned dataset

|  |  |
| --- | --- |
| Property | Description |
| Number of Rows | 100 |
| Number of Columns | 4 |

Table 2 representation of the expected schema for the clean data

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Nullable |
| Channel\_name | VARCHAR | NO |
| Total\_subscribers | INTEGER | NO |
| total\_views | INTEGER | NO |
| total\_videos | INTEGER | NO |

The steps required to clean and shape the data into the desired format are as follows:

* Remove unnecessary columns by only selecting the ones you need
* Extract YouTube channel names from the first column
* Rename columns using aliases

## 5.2 Transform the data

*/\**

*# 1. Select the required columns*

*# 2. Extract the channel name from the 'NOMBRE' column*

*#. Rename some columns names using alias\*/*

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Figure 1 shows the relevant columns for analysis

## 5.3 Create the SQL view

*/\**

*# 1. Create a view to store the transformed data*

*# 2. Cast the extracted channel name as VARCHAR(100)*

*# 3. Select the required columns from the top\_uk\_youtubers\_2024 SQL table*

*\*/*

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Figure 2: SQL code for creating views

## 5.4 Testing

What data quality and validation checks are you going to create?

Here are the data quality tests conducted:

***Row count check***

*/\**

*# Count the total number of records (or rows) are in the SQL view*

*\*/*

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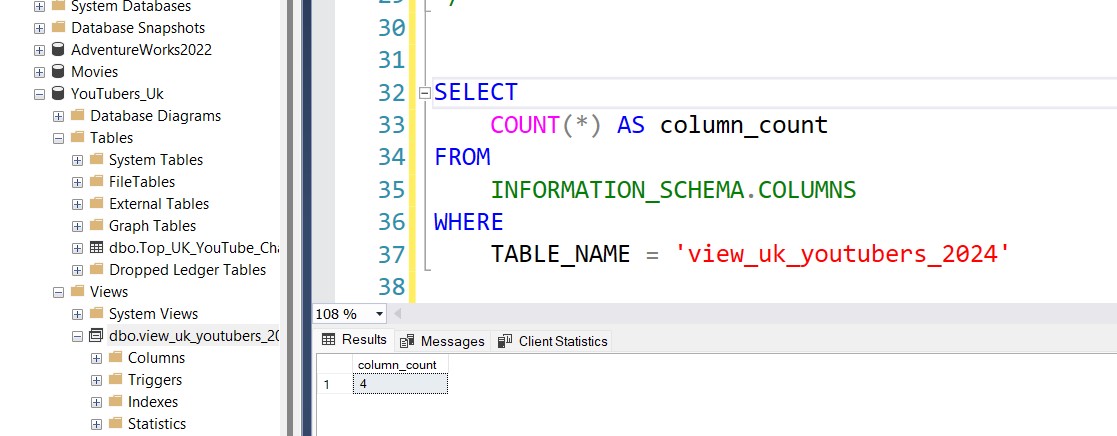
**Column count check**

*SQL query*

*/\**

*# Count the total number of columns (or fields) are in the SQL view*

*\*/*



***Data type check***

*SQL query*

*/\**

*# Check the data types of each column from the view by checking the INFORMATION SCHEMA view*

*\*/*

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***Duplicate count check***

*SQL query*

*/\**

*# 1. Check for duplicate rows in the view*

*# 2. Group by the channel name*

*# 3. Filter for groups with more than one row*

*\*/*

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# 6. Visualization

## 6.1 Results

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Figure 3: Required visuals for the dashboard showing the top UK youtubers so far in 2024

## 6.1.1 DAX Measures

***1. Total Subscribers (M)***

Total Subscribers (M) =

VAR million = 1000000

VAR sumOfSubscribers = SUM(view\_uk\_youtubers\_2024[total\_subscribers])

VAR totalSubscribers = DIVIDE(sumOfSubscribers,million)

RETURN totalSubscribers

***2. Total Views (B)***

Total Views (B) =

VAR billion = 1000000000

VAR sumOfTotalViews = SUM(view\_uk\_youtubers\_2024[total\_views])

VAR totalViews = ROUND(sumOfTotalViews / billion, 2)

RETURN totalViews

***3. Total Videos***

Total Videos =

VAR totalVideos = SUM(view\_uk\_youtubers\_2024[total\_videos])

RETURN totalVideos

***4. Average Views Per Video (M)***

Average Views per Video (M) =

VAR sumOfTotalViews = SUM(view\_uk\_youtubers\_2024[total\_views])

VAR sumOfTotalVideos = SUM(view\_uk\_youtubers\_2024[total\_videos])

VAR avgViewsPerVideo = DIVIDE(sumOfTotalViews,sumOfTotalVideos, BLANK())

VAR finalAvgViewsPerVideo = DIVIDE(avgViewsPerVideo, 1000000, BLANK())

RETURN finalAvgViewsPerVideo

***5. Subscriber Engagement Rate***

Subscriber Engagement Rate =

VAR sumOfTotalSubscribers = SUM(view\_uk\_youtubers\_2024[total\_subscribers])

VAR sumOfTotalVideos = SUM(view\_uk\_youtubers\_2024[total\_videos])

VAR subscriberEngRate = DIVIDE(sumOfTotalSubscribers, sumOfTotalVideos, BLANK())

RETURN subscriberEngRate

***6. Views per subscriber***

Views Per Subscriber =

VAR sumOfTotalViews = SUM(view\_uk\_youtubers\_2024[total\_views])

VAR sumOfTotalSubscribers = SUM(view\_uk\_youtubers\_2024[total\_subscribers])

VAR viewsPerSubscriber = DIVIDE(sumOfTotalViews, sumOfTotalSubscribers, BLANK())

RETURN viewsPerSubscriber

# 7. Analysis

## 7.1 Findings

For this analysis, we are going to focus on the questions below to get the information we need for our marketing client.

Here are the key questions we need to answer for the marketing client:

1. Who are the top 10 YouTubers with the most subscribers?
2. Which 3 channels have uploaded the most videos?
3. Which 3 channels have the most views?
4. Which 3 channels have the highest average views per video?
5. Which 3 channels have the highest views per subscriber ratio?
6. Which 3 channels have the highest subscriber engagement rate per video uploaded?
7. **Who are the top 10 YouTubers with the most subscribers?**

|  |  |  |
| --- | --- | --- |
| Rank | Channel\_Name | Subscribers(M) |
| 1 | NoCopyrightSounds | 33.60 |
| 2 | DanTDM | 28.60 |
| 3 | Dan Rhodes | 26.50 |
| 4 | Miss Katy | 24.50 |
| 5 | Mister Max | 24.40 |
| 6 | KSI | 24.10 |
| 7 | Jelly | 23.50 |
| 8 | Dua Lipa | 23.30 |
| 9 | Sidemen | 21.00 |
| 10 | Ali-A | 18.90 |

1. **Which 3 channels have uploaded the most videos?**

|  |  |  |
| --- | --- | --- |
| Rank | Channel\_Name | Videos uploaded |
| 1 | GRM Daily | 14,696 |
| 2 | Manchester City | 8,248 |
| 3 | Yogscast | 6,435 |

1. **Which 3 channels have the most views?**

|  |  |  |
| --- | --- | --- |
| Rank | Channel\_Name | Total Views(B) |
| 1 | DanTDM | 19.78 |
| 2 | Dan Rhodes | 18.56 |
| 3 | Mister Max | 15.97 |

1. **Which 3 channels have the highest average views per video?**

|  |  |
| --- | --- |
| Channel\_Name | Average Views per Video (M) |
| Mark Ronson | 32.27 |
| Jessie J | 5.97 |
| Dua Lipa | 5.76 |

1. Which 3 channels have the highest views per subscriber ratio?

|  |  |  |
| --- | --- | --- |
| Rank | Channel Name | Views per Subscribers |
| 1 | GRM Daily | 1185.79 |
| 2 | Nickelodeon | 1061.04 |
| 3 | Disney Junior UK | 1031.97 |

1. Which 3 channels have the highest subscriber engagement rate per video uploaded?

|  |  |  |
| --- | --- | --- |
| Rank | Channel Name | Subscriber Engagement Rate |
| 1 | Mark Ronson | 343,000 |
| 2 | Jessie J | 110,416.67 |
| 3 | Dua Lipa | 104,954.95 |

For this analysis, we will prioritize analysing the metrics that are important in generating the expected ROI for our marketing client, which are the YouTube channels with the most

1. subscribers
2. total views
3. videos uploaded

## 7.2 Validation

**1. Youtubers with the most subscribers**

Calculation breakdown

Campaign idea = product placement

**NoCopyrightSounds**

Average views per video = 6.92 million

Product cost = $5

Potential units sold per video = 6.92 million x 2% conversion rate = 138,400 units sold

Potential revenue per video = 138,400 x $5 = $692,000

Campaign cost (one-time fee) = $50,000

**Net profit = $692,000 - $50,000 = $642,000**

**DanTDM**

Average views per video = 5.34 million

Product cost = $5

Potential units sold per video = 5.34 million x 2% conversion rate = 106,800 units sold

Potential revenue per video = 106,800 x $5 = $534,000

Campaign cost (one-time fee) = $50,000

**Net profit = $534,000 - $50,000 = $484,000**

**Dan Rhodes**

Average views per video = 11.15 million

Product cost = $5

Potential units sold per video = 11.15 million x 2% conversion rate = 223,000 units sold

Potential revenue per video = 223,000 x $5 = $1,115,000

Campaign cost (one-time fee) = $50,000

**Net profit = $1,115,000 - $50,000 = $1,065,000**

Best option from category: Dan Rhodes

***SQL query***

/\*

# 1. Define variables

# 2. Create a CTE that rounds the average views per video

# 3. Select the column you need and create calculated columns from existing ones

# 4. Filter results by YouTube channels

# 5. Sort results by net profits (from highest to lowest)

\*/

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Figure 4: showing youtubers with the most subscribers sorted by profits

**2. Youtubers with the most videos uploaded**

Calculation breakdown

Campaign idea = sponsored video series

GRM Daily

Average views per video = 510,000

Product cost = $5

Potential units sold per video = 510,000 x 2% conversion rate = 10,200 units sold

Potential revenue per video = 10,200 x $5= $51,000

Campaign cost (11-videos @ $5,000 each) = $55,000

**Net profit = $51,000 - $55,000 = -$4,000 (potential loss)**

b. Manchester City

Average views per video = 240,000

Product cost = $5

Potential units sold per video = 240,000 x 2% conversion rate = 4,800 units sold

Potential revenue per video = 4,800 x $5= $24,000

Campaign cost (11-videos @ $5,000 each) = $55,000

**Net profit = $24,000 - $55,000 = -$31,000 (potential loss)**

b. Yogscast

Average views per video = 710,000

Product cost = $5

Potential units sold per video = 710,000 x 2% conversion rate = 14,200 units sold

Potential revenue per video = 14,200 x $5= $71,000

Campaign cost (11-videos @ $5,000 each) = $55,000

**Net profit = $71,000 - $55,000 = $16,000 (profit)**

Best option from category: Yogscast

***SQL query***

/\*

# 1. Define variables

# 2. Create a CTE that rounds the average views per video

# 3. Select the columns you need and create calculated columns from existing ones

# 4. Filter results by YouTube channels

# 5. Sort results by net profits (from highest to lowest)

\*/

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Figure 5 youtubers with the most videos uploaded sorted by profits

**3. Youtubers with the most views**

Calculation breakdown

Campaign idea = Influencer marketing

**DanTDM**

Average views per video = 5.34 million

Product cost = $5

Potential units sold per video = 5.34 million x 2% conversion rate = 106,800 units sold

Potential revenue per video = 106,800 x $5 = $534,000

Campaign cost (3-month contract) = $130,000

**Net profit = $534,000 - $130,000 = $404,000**

b. Dan Rhodes

Average views per video = 11.15 million

Product cost = $5

Potential units sold per video = 11.15 million x 2% conversion rate = 223,000 units sold

Potential revenue per video = 223,000 x $5 = $1,115,000

Campaign cost (3-month contract) = $130,000

**Net profit = $1,115,000 - $130,000 = $985,000**

c. Mister Max

Average views per video = 14.06 million

Product cost = $5

Potential units sold per video = 14.06 million x 2% conversion rate = 281,200 units sold

Potential revenue per video = 281,200 x $5 = $1,406,000

Campaign cost (3-month contract) = $130,000

**Net profit = $1,406,000 - $130,000 = $1,276,000**

Best option from category: Mister Max

***SQL query***

/\*

# 1. Define variables

# 2. Create a CTE that rounds the average views per video

# 3. Select the columns you need and create calculated columns from existing ones

# 4. Filter results by YouTube channels

# 5. Sort results by net profits (from highest to lowest) \*/

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Figure 6: youtubers with the most views filtered by net profits

# Discovery

Based on the analysis, I discovered that

* NoCopyrightSounds, Dan Rhodes and DanTDM are the channels with the most subscribers in the UK
* GRM Daily, Man City and Yogscast are the channels with the most videos uploaded
* DanTDM, Dan Rhodes and Mister Max are the channels with the most views
* Entertainment channels are useful for broader reach, as the channels posting consistently on their platforms and generating the most engagement are focus on entertainment and music

# Recommendations

Based on the insights gathered, we recommend

* Dan Rhodes is the best YouTube channel to collaborate with if we want to maximize visibility because this channel has the most YouTube subscribers in the UK
* Although GRM Daily, Man City and Yogcasts are regular publishers on YouTube, it may be worth considering whether collaborating with them with the current budget caps are worth the effort, as the potential return on investments is significantly lower compared to the other channels.
* Mister Max is the best YouTuber to collaborate with if we are interested in maximizing reach, but collaborating with DanTDM and Dan Rhodes may be better long-term options because they both have large subscriber bases and are averaging significantly high number of views.
* The top 3 channels to form collaborations with are NoCopyrightSounds, DanTDM and Dan Rhodes based on this analysis, because they attract the most engagement on their channels consistently.

**Potential ROI**

What ROI do we expect if we take this course of action?

1. Setting up a collaboration deal with Dan Rhodes would make the client a net profit of $1,065,000 per video
2. An influencer marketing contract with Mister Max can see the client generate a net profit of $1,276,000
3. If we go with a product placement campaign with DanTDM, this could generate the client approximately $484,000 per video. If we advance with an influencer marketing campaign deal instead, this will make the client a one-off net profit of $404,000.
4. NoCopyrightSounds could profit the client $642,000 per video too (which is worth considering)

**Action plan**

**What course of action should we take and why?**

Based on our analysis, we believe the best channel to advance a long-term partnership deal with to promote the client's products is the Dan Rhodes channel.

We will have conversations with the marketing client to forecast what they also expect from this collaboration. Once we observe we are hitting the expected milestones, we will advance with potential partnerships with DanTDM, Mister Max and NoCopyrightSounds channels in the future.

**What steps do we take to implement the recommended decisions effectively?**

1. Reach out to the teams behind each of these channels, starting with Dan Rhodes
2. Negotiate contracts within the budgets allocated to each marketing campaign
3. Kick off the campaigns and track each of their performances against the KPIs
4. Review how the campaigns have gone, gather insights and optimize based on feedback from converted customers and each channel's audiences