



YouTube

SQL Analysis



By Kanishka Maheshwari



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Query 1 to 10



Takeaways



Thank you



About YouTube

Founded in 2005, YouTube is a global video-sharing platform owned by Google. As of January 2024, it boasts over 2.7 billion monthly active users, making it one of the most visited websites worldwide. Users engage by uploading, viewing, liking, commenting, and subscribing to a vast array of content.



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Objective

- Identifying top-performing channels by subscribers and engagement.
- Analysing channel revenue metrics.
- Extracting video-wise performance indicators (likes, comments, views).
- Using SQL logic (aggregation, filtering, etc.).

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Database Overview

youtube_channels Table

channel_id	channel_name	category	subscribers	avg_views	nox_score
1	MrBeast	Entertainment	370M	187.67M	0.5
2	T-Series	Music	288M	336.88K	48.2
3	Cocomelon - Nursery Rhymes	Education	190M	2.95M	0.8
4	SET India	Entertainment	182M	15.61K	4.3
5	Vlad and Niki	Entertainment	135M	3.44M	24.3
6	Kids Diana Show	Entertainment	131M	4.2M	8.5
7	Like Nastya	Entertainment	126M	15.04M	4.8
8	Stokes Twins	People & Blogs	116M	77.77M	5.4
9	Zee Music Company	Music	115M	1.37M	467.1
10	PewDiePie	Gaming	110M	2.98M	0.9

channel_videos Table

video_id	channel_id	video_title	upload_date	views	likes	comments
1	1	Epic Challenge Video	2024-03-01	15,000,000	500,000	10,000
2	2	Best Bollywood Songs	2024-02-15	3,000,000	250,000	5,000
3	3	Kids Learning ABC	2024-01-10	5,000,000	200,000	8,000
4	4	Comedy Skit Compilation	2024-03-05	2,000,000	150,000	3,000
5	5	Vlad and Niki Adventure	2024-02-22	6,000,000	180,000	4,000
6	6	Diana's New Toys	2024-01-30	4,000,000	175,000	3,500
7	7	Fun Family Vlog	2024-02-18	3,500,000	190,000	4,500
8	8	Crazy Stunts Compilation	2024-03-01	8,000,000	210,000	7,000
9	9	Top Music Hits 2024	2024-02-10	1,000,000	50,000	2,000
10	10	Gaming Livestream Highlights	2024-01-20	2,500,000	120,000	6,000

channel_engagement Table

engagement_id	channel_id	likes_per_video	comments_per_video	shares_per_video
1	1	450,000.50	12,000.75	30,000.25
2	2	300,000.20	10,000.00	25,000.10
3	3	200,000.15	8,000.25	20,000.50
4	4	150,000.75	5,000.60	18,000.80
5	5	180,000.50	4,000.90	15,000.60
6	6	175,000.35	3,500.75	14,000.40
7	7	190,000.45	4,500.85	17,000.20
8	8	210,000.30	7,000.25	20,000.35
9	9	50,000.00	2,000.75	5,000.80
10	10	120,000.90	6,000.35	9,000.50

channel_revenue Table

revenue_id	channel_id	monthly_revenue	yearly_revenue
1	1	5,000,000.00	60,000,000.00
2	2	4,500,000.00	54,000,000.00
3	3	1,500,000.00	18,000,000.00
4	4	1,200,000.00	14,400,000.00
5	5	900,000.00	10,800,000.00
6	6	850,000.00	10,200,000.00
7	7	800,000.00	9,600,000.00
8	8	780,000.00	9,360,000.00
9	9	750,000.00	9,000,000.00
10	10	700,000.00	8,400,000.00

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Problem Statements

1. Top 5 most subscribed YouTube channels.
2. Total yearly revenue of all channels.
3. Videos uploaded by 'MrBeast'.
4. Average engagement (likes & comments) for each channel.
5. Channels with a NOX score higher than 10 (highest to lowest score).
6. Most commented video.
7. Total channels per category.
8. Channel names starting with "M" and ending with "t".
9. Videos uploaded between '2024-03-01' and '2024-08-01'.
10. Top 3 most liked videos.



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```
SELECT
    channel_id,
    channel_name,
    subscribers,
    CASE
        WHEN subscribers LIKE '%M' THEN REPLACE(subscribers, 'M', '') * 1000000
        ELSE subscribers
    END AS numeric_equivalent
FROM
    youtube_channels
ORDER BY numeric_equivalent DESC
LIMIT 5;
```

#Subscribers #Channels

	channel_id	channel_name	subscribers	numeric_equivalent
▶	1	MrBeast	370M	370000000
	2	T-Series	288M	288000000
	3	Cocomelon - Nursery Rhymes	190M	190000000
	4	SET India	182M	182000000
	5	Vlad and Niki	135M	135000000



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Query 2



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SELECT

#Revenue #Aggregation

SUM(yearly_revenue) AS total_yearly_revenue

FROM

channel_revenue;

total_yearly_revenue

203760000.00



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Query 3



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SELECT

```
youtube_channels.channel_id,  
youtube_channels.channel_name,  
channel_videos.video_id,  
channel_videos.video_title,  
channel_videos.upload_date
```

FROM

```
youtube_channels
```

JOIN

```
channel_videos ON youtube_channels.channel_id = channel_videos.channel_id
```

WHERE

```
youtube_channels.channel_name = 'MrBeast';
```

#Videos #ChannelSearch

	channel_id	channel_name	video_id	video_title	upload_date
▶	1	MrBeast	1	Epic Challenge Video	2024-03-01



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Query 4



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SELECT

```
youtube_channels.channel_id,  
youtube_channels.channel_name,  
channel_engagement.likes_per_video AS avg_likes,  
channel_engagement.comments_per_video AS avg_comments
```

FROM

```
youtube_channels
```

JOIN

```
channel_engagement ON youtube_channels.channel_id = channel_engagement.channel_id;
```

#Engagement #Averages

	channel_id	channel_name	avg_likes	avg_comments
▶	1	MrBeast	450000.50	12000.75
	2	T-Series	300000.20	10000.00
	3	Cocomelon - Nursery Rhymes	200000.15	8000.25
	4	SET India	150000.75	5000.60
	5	Vlad and Niki	180000.50	4000.90
	6	Kids Diana Show	175000.35	3500.75
	7	Like Nastya	190000.45	4500.85
	8	Stokes Twins	210000.30	7000.25
	9	Zee Music Company	50000.00	2000.75
	10	PewDiePie	120000.90	6000.35



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Query 5



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```
SELECT * FROM youtube_channels
WHERE nox_score > 10
ORDER BY nox_score DESC;
```

#NoxScore #Filter

	channel_id	channel_name	category	subscribers	avg_views	nox_score
▶	9	Zee Music Company	Music	115M	1.37M	467.10
	2	T-Series	Music	288M	336.88K	48.20
	5	Vlad and Niki	Entertainment	135M	3.44M	24.30
⌵	NULL	NULL	NULL	NULL	NULL	NULL



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Query 6



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SELECT

```
youtube_channels.channel_id,  
youtube_channels.channel_name,  
channel_videos.video_id,  
channel_videos.video_title,  
channel_videos.comments
```

FROM

```
channel_videos
```

JOIN

```
youtube_channels ON channel_videos.channel_id = youtube_channels.channel_id
```

ORDER BY channel_videos.comments DESC

LIMIT 1;

#Comments #MostEngaged

	channel_id	channel_name	video_id	video_title	comments
▶	1	MrBeast	1	Epic Challenge Video	10000

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Query 7



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```
SELECT                                     #Category #ChannelCount
    category, COUNT(channel_id) AS channels_count
FROM
    youtube_channels
GROUP BY category;
```

	category	channels_count
▶	Entertainment	5
	Music	2
	Education	1
	People & Blogs	1
	Gaming	1



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Query 8



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#PatternMatching #LIKEQuery

```
SELECT
    channel_id, channel_name, category
FROM
    youtube_channels
WHERE
    channel_name LIKE 'M%t';
```

	channel_id	channel_name	category
▶	1	MrBeast	Entertainment
⦿	NULL	NULL	NULL



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Query 9



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Thank you

SELECT

#DateRange #VideoUpload

```
youtube_channels.channel_name,  
channel_videos.video_title,  
channel_videos.upload_date
```

FROM

```
channel_videos
```

JOIN

```
youtube_channels ON channel_videos.channel_id = youtube_channels.channel_id
```

WHERE

```
upload_date BETWEEN '2024-03-01' AND '2024-08-01';
```

	channel_name	video_title	upload_date
▶	MrBeast	Epic Challenge Video	2024-03-01
	SET India	Comedy Skit Compilation	2024-03-05
	Stokes Twins	Crazy Stunts Compilation	2024-03-01

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Query 10



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SELECT

```
youtube_channels.channel_id,  
youtube_channels.channel_name,  
channel_videos.video_id,  
channel_videos.video_title,  
channel_videos.likes
```

FROM

```
youtube_channels
```

JOIN

```
channel_videos ON youtube_channels.channel_id = channel_videos.channel_id
```

ORDER BY channel_videos.likes **DESC****LIMIT 3;**

#Likes #TopVideos

	channel_id	channel_name	video_id	video_title	likes
▶	1	MrBeast	1	Epic Challenge Video	500000
	2	T-Series	2	Best Bollywood Songs	250000
	8	Stokes Twins	8	Crazy Stunts Compilation	210000

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📺 Observations

✓ Top 5 Channels Dominate Subscriptions.

✓ Revenue Varies Heavily by Channel.

✓ Engagement Levels Differ Across Channels'.

✓ Channels with High NOX Scores Identified.

✓ Category Distribution Uneven.



📺 Recommendations

Analyze top channels' content strategy (content format, posting schedule).

Implement high-revenue channels' monetization.

Boost audience interaction.

Optimize content for NOX scores.

Inform content diversification.

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