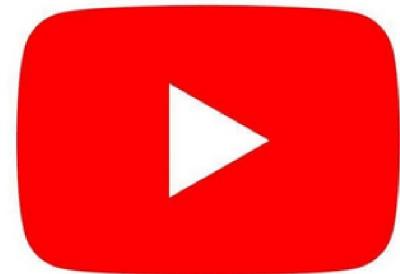


ANALYZING YOUTUBE
TRENDS WITH MONGODB



ANALYZING YOUTUBE TRENDS WITH MONGODB

Presentation are communication tools that can be used as demonstrations, lectures, reports, and more. it is mostly presented before an audience.



Davyd Azarov; 20221688
Artem Khomytskyi; 20221686
Tymofii Kuzmenko; 20221690
Kemal Can Özmetli; 20231931

TABLE OF CONTENTS

03

PROJECT THEME & MOTIVATION

Unveiling YouTube Trends: Insights from MongoDB

04

MONGODB - WHY IT'S THE RIGHT CHOICE

Why MongoDB?

07

ENHANCING DATA WITH AGGREGATIONS

Powering Insights with MongoDB Aggregations

05

THE POWER OF INDEXING

The Role of Indexing in Performance

06

BUSINESS INSIGHTS FROM THE DATA

Unveiling Eastern European YouTube Trends

03

PROJECT THEME & MOTIVATION

This project focuses on analyzing the trends of Eastern European YouTube content using MongoDB as our database.

We chose MongoDB because of its flexible schema and powerful aggregation capabilities, ideal for handling the complex and ever-evolving nature of YouTube data.



04



MongoDB®



MONGODB - WHY IT'S THE RIGHT CHOICE

MONGODB'S STRENGTHS MAKE IT THE IDEAL TOOL FOR THIS PROJECT:

Flexible Schema: Adapts to the varied structure of YouTube video data, including different categories, metadata fields, and evolving trends.

Scalability: Easily handles large volumes of data, accommodating the massive dataset of Eastern European YouTube videos.

Fast Querying: Allows for quick retrieval of specific information, crucial for analyzing trends and generating insights.

Powerful Aggregation Framework: Enables advanced analysis through complex aggregations, allowing us to extract valuable insights from the data.



Key for Complex Queries: Indexing is crucial for executing complex queries involving multiple criteria and sorting, ensuring accurate and timely results.

THE POWER OF INDEXING

Faster Data Retrieval: Indexes act as shortcuts, allowing MongoDB to quickly locate specific data points without scanning the entire dataset.

Optimized Aggregations: Indexes enhance the efficiency of aggregation pipelines, leading to faster analysis and insights.



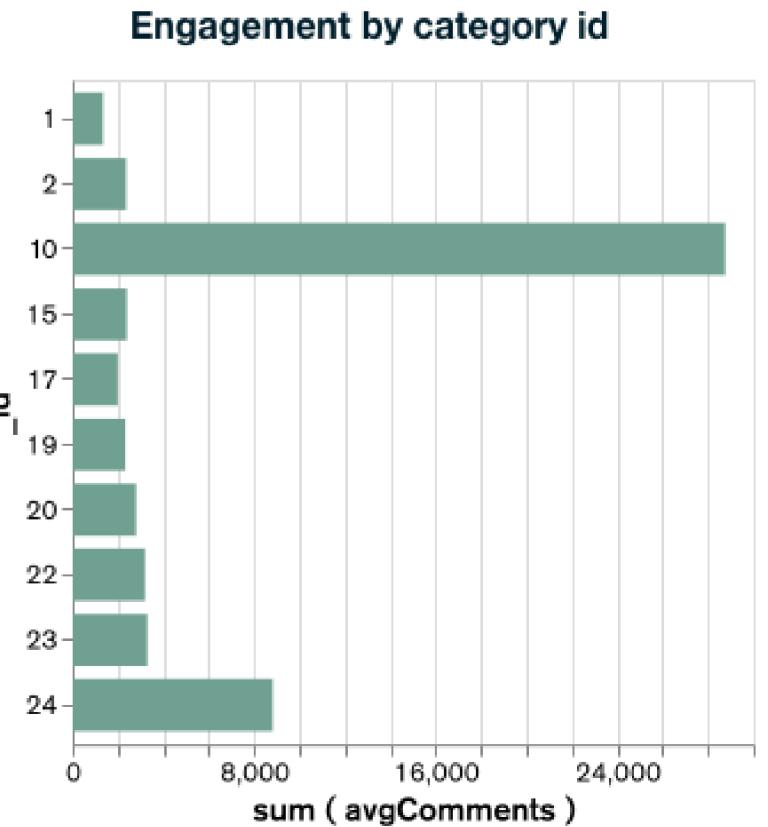
MongoDB®

06

ANALYZING YOUTUBE
TRENDS WITH MONGODB

BUSINESS INSIGHTS FROM THE DATA

Our analysis using MongoDB reveals fascinating insights into the Eastern European YouTube landscape:



Top Channels by Views: A4, BLACKPINK, Big Hit Labels, HYBE LABELS, SMTOWN, LABELCOM, Алексей Навальный, BANGTANTV, Comedy Club, JYP Entertainment

Trending Videos: Identify the most popular videos:

1. Побег Из КАРТОННОЙ ТЮРЬМЫ Челлендж **2 часть**
2. DAVA & Филипп Киркоров – РОЛЕКС (Премьера клипа 2020)
3. Как Я ЧУТЬ НЕ УМЕР 2 (анимация)

High-Engagement Videos:

1. BTS (방탄소년단) 'Dynamite' Official MV
2. BTS (방탄소년단) 'Butter' Official MV
3. BLACKPINK – 'Lovesick Girls' M/V



ENHANCING DATA WITH AGGREGATIONS

We used MongoDB aggregations to gain valuable insights from the dataset:

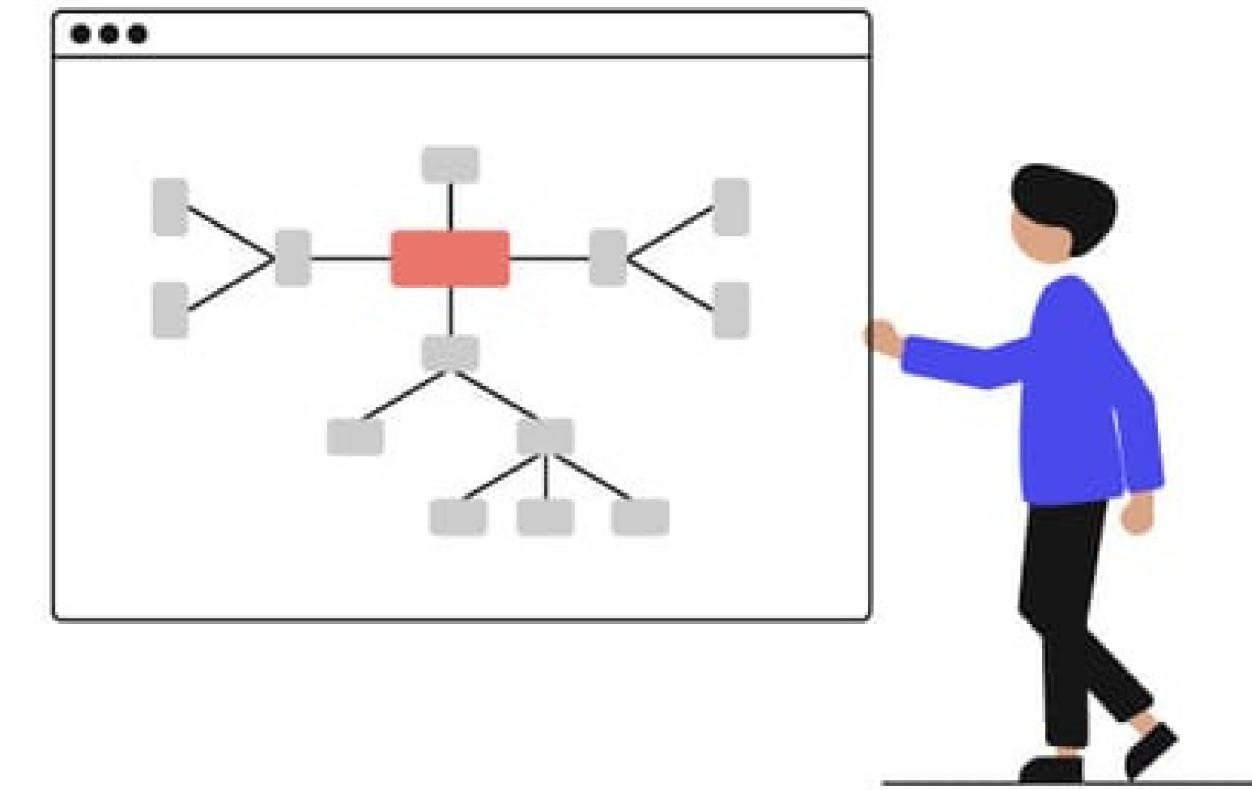
Top Channels by Views: Identifies the most popular channels based on total views.

Average Engagement per Category: Calculates average views, likes, and comments for each category.

Trending Videos by Day and Category: Identifies the most popular videos by day and category.

Top Trending Videos by Publish Time: Reveals the most recent trending videos based on publication time.

Top Channels by Videos with Over a Million Likes: Identifies channels with the most videos that have achieved over a million likes.



BENEFITS OF AGGREGATIONS:

Consolidate Data: Aggregate operations combine data into meaningful summaries, revealing trends and patterns.

Group & Sort: Group data by specific criteria and sort it based on different fields, enabling targeted analysis.

Calculate Metrics: Derive insights by calculating various metrics like averages, sums, and counts.

Refine & Enhance: Utilize aggregation stages to refine the data, filter out unwanted information, and improve accuracy.

CONCLUSION

MongoDB proved to be a powerful tool for analyzing the Eastern European YouTube landscape, enabling us to identify trends, understand audience preferences, and uncover valuable insights. By leveraging its flexible schema, powerful aggregation framework, and optimized indexing, we efficiently extracted and analyzed the data, providing a comprehensive understanding of the Eastern European YouTube market.

THANK YOU!