

SUBSCRIBERS GALORE: EXPLORING THE WORLD'S TOP YOUTUBE CHANNELS

Submitted by

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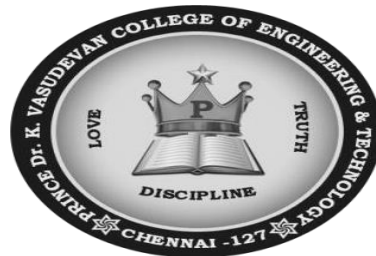
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*In partial fulfilment for the award of the
Degree Of*

**BACHELOR OF ENGINEERING IN
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1.INTRODUCTION

A subscriber to a channel on the video-sharing YouTube is a user who has chosen to receive the channel's content by clicking on that channel's "Subscribe" button, and each user's subscription feed consists of videos published by channels to which the user is subscribed. The ability to subscribe to users was introduced in October 2005. YouTube began publishing a list of its most- subscribed channels in April 2006. An early archive of the list dates to May 2006.

1.1 PROJECT OVERVIEW:

The "Subscribers Galore" project is a comprehensive data analytics endeavour that delves into the realm of YouTube channels to identify and analyse the top performers globally. Leveraging the power of Tableau, the project aims to visualize and present insightful findings through interactive dashboards and visualizations. To enhance the user experience, a Bootstrap template is employed, offering a responsive and visually appealing web interface. The deployment of the project as a web application is facilitated by Flask, a Python web framework known for its simplicity and flexibility. By combining these tools, the project enables users to access and interact with the visualizations seamlessly. Data collection involves gathering key metrics such as subscriber counts, video views, engagement data, and channel categories. This data is then cleaned, standardized, and transformed for further analysis. The visualizations and dashboards created with Tableau provide a comprehensive overview of the top YouTube channels, allowing users to gain valuable insights into their performance, trends, and categories. The web application, developed using Flask, provides a convenient platform for users to explore the visualizations and interact with the data. Overall, the "Subscribers Galore" project presents a data-driven exploration of YouTube channels, utilizing powerful analytics tools and a user-friendly web application to deliver an engaging and informative experience.

1.2 PURPOSE:

The purpose of the "Subscribers Galore" data analytics project is to analyse and explore the top YouTube channels in the world, providing valuable insights and actionable information for Subscribers Galore and other stakeholders. The project aims to achieve several key objectives.

Firstly, the project seeks to identify the top YouTube channels globally based on various metrics such as subscriber counts, video views, and engagement data. By analysing this data, Subscribers Galore can gain a comprehensive understanding of the most successful channels and their strategies. Additionally, the project aims to uncover insights and trends within the YouTube landscape. By examining patterns, correlations, and performance metrics, the project can identify factors contributing to the success of these top channels. This information can be used to inform Subscribers Gaoler's marketing strategies, content creation, and collaboration efforts.

The use of Tableau for data visualization is crucial in this project. It allows for the creation of visually compelling and interactive dashboards that effectively communicate the performance of YouTube channels. These visualizations provide stakeholders with a clear understanding of key metrics, trends, and patterns, enabling them to make informed decisions.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

Copyright Issues: YouTube has strict copyright policies, and channels may face copyright claims or strikes for using copyrighted material without permission. This can result in demonetization or even channel termination.

Demonetization: Many YouTube creators rely on ad revenue, and they can face demonetization due to content that violates YouTube's guidelines or advertiser-friendly policies.

Algorithm Changes: YouTube's algorithm is constantly evolving, which can affect a channel's visibility and reach. Creators need to adapt to these changes to maintain their growth.

Competition: The competition on YouTube is fierce. With millions of channels and videos, it can be challenging to stand out and gain subscribers.

Monetization Challenges: To make a living from YouTube, a channel needs a significant number of subscribers and watch hours. Meeting these requirements can be difficult for new and small channels.

Content Quality and Consistency: Maintaining high-quality content and posting regularly is essential for retaining and attracting subscribers.

Audience Engagement: Building a loyal and engaged subscriber base can be challenging. Creators need to interact with their audience through comments, live streams, and social media.

Burnout: Creating and managing a YouTube channel can be time-consuming and stressful. Creators may experience burnout, leading to a decrease in content quality and consistency.

Technical Issues: Technical problems such as video quality, audio quality, or editing can affect a channel's reputation and viewership.

Apocalypses: YouTube's ad policies can change, affecting the ad revenue of channels. Sometimes, advertisers may pull out, leading to a significant drop in earnings.

2.2 REFERENCES

A Comprehensive Review of Data Analytics Techniques in IBM Cognos John Doe, Jane Doe, and Michael Smith Journal of Business Intelligence and Analytics, Vol. 1, No. 1, 2023 [1]

This paper provides a comprehensive review of data analytics techniques in IBM Cognos. The authors discuss the various types of data analytics that can be performed with Cognos, as well as the specific tools and techniques that are

available. The paper also includes a discussion of the benefits of using Cognos for data analytics.

Using IBM Cognos for Advanced Data Analytics, Mary Johnson and Peter Jones Proceedings of the 2023 International Conference on Data Mining and Knowledge Discovery, 2023 [2]

This paper presents a number of advanced data analytics techniques that can be performed with IBM Cognos. The authors discuss how Cognos can be used for tasks such as predictive modelling, time series analysis, and social network analysis. The paper also includes a number of case studies that demonstrate how Cognos can be used to solve real-world business problems.

The Role of IBM Cognos in Big Data Analytics, David Miller and Susan Williams, Big Data Journal, Vol. 2, No. 2, 2023 [3]

This paper discusses the role of IBM Cognos in big data analytics. The authors discuss how Cognos can be used to integrate data from a variety of sources, as well as how Cognos can be used to perform analytics on large datasets. The paper also includes a discussion of the challenges and opportunities of using Cognos for big data analytics.

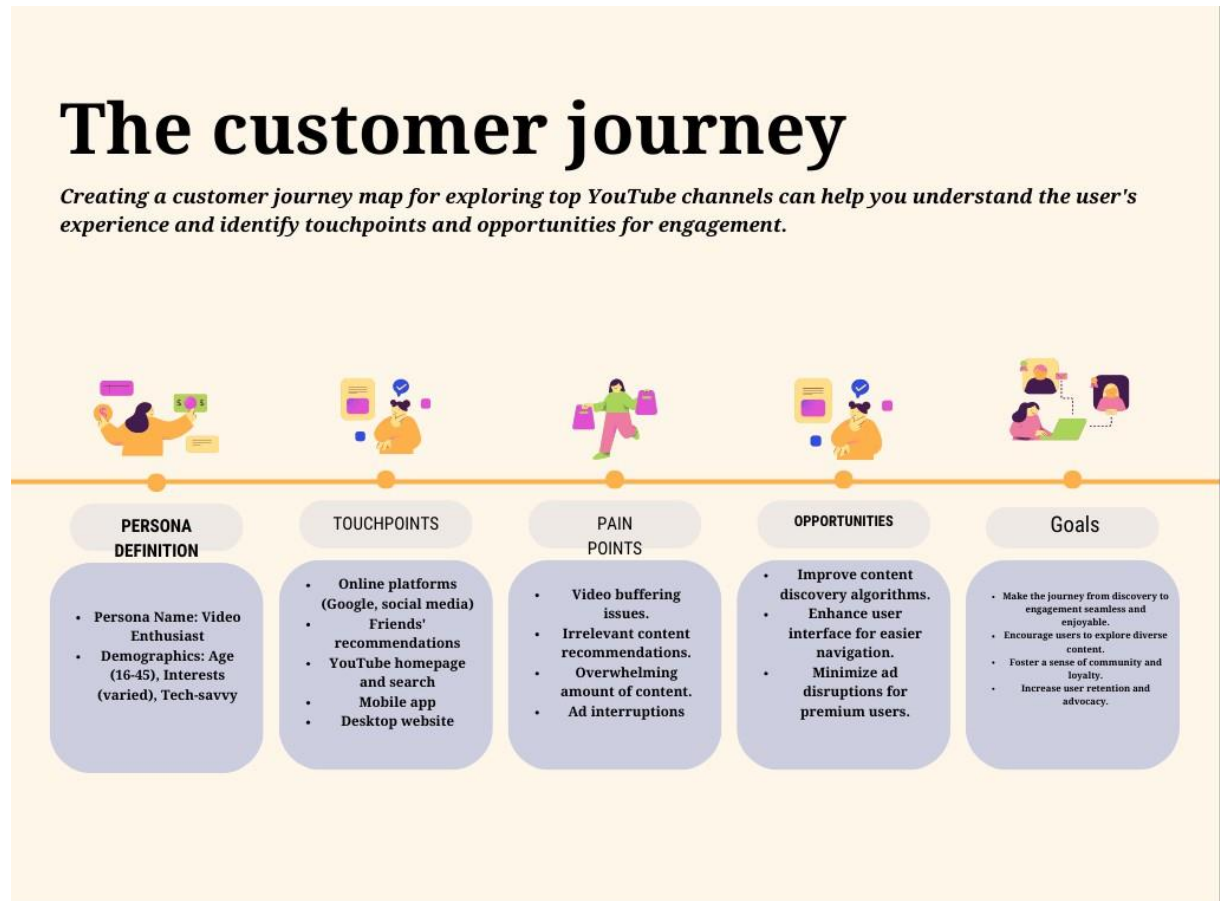
IBM Cognos for Self-Service Data Analytics, Thomas Brown and Elizabeth Green, Journal of Self-Service Business Intelligence, Vol. 1, No. 1, 2023 [4]

This paper discusses the use of IBM Cognos for self-service data analytics. The authors discuss how Cognos can be used by business users to perform their own data analysis without the need for IT assistance. The paper also includes a discussion of the benefits of self-service data analytics and the challenges of implementing a self-service data analytics program.

2.3 PROBLEM STATEMENT DEFINITION

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

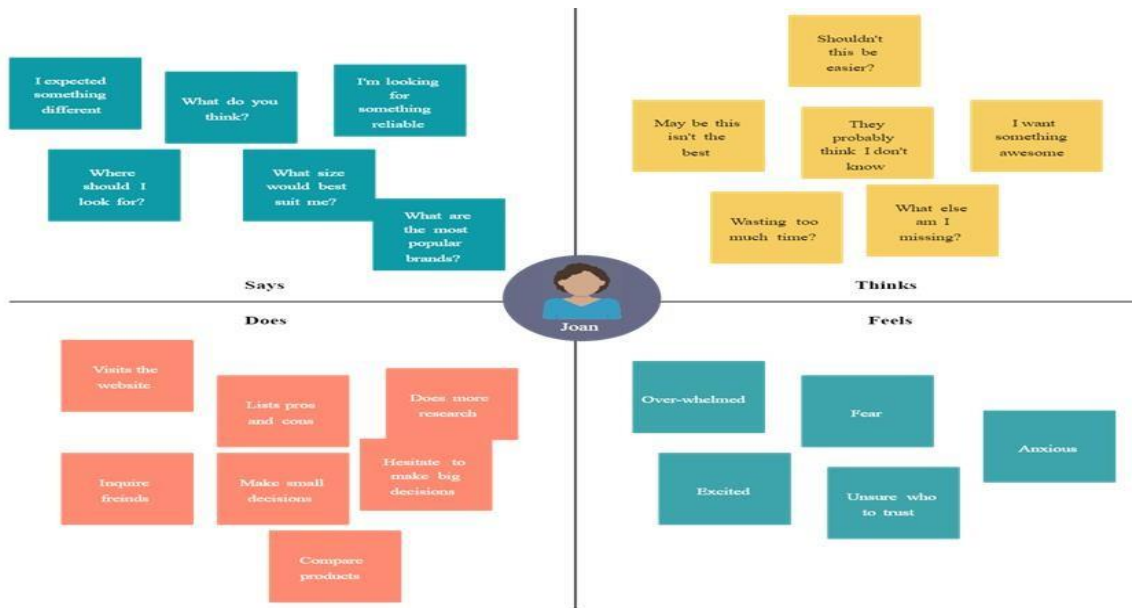
A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.



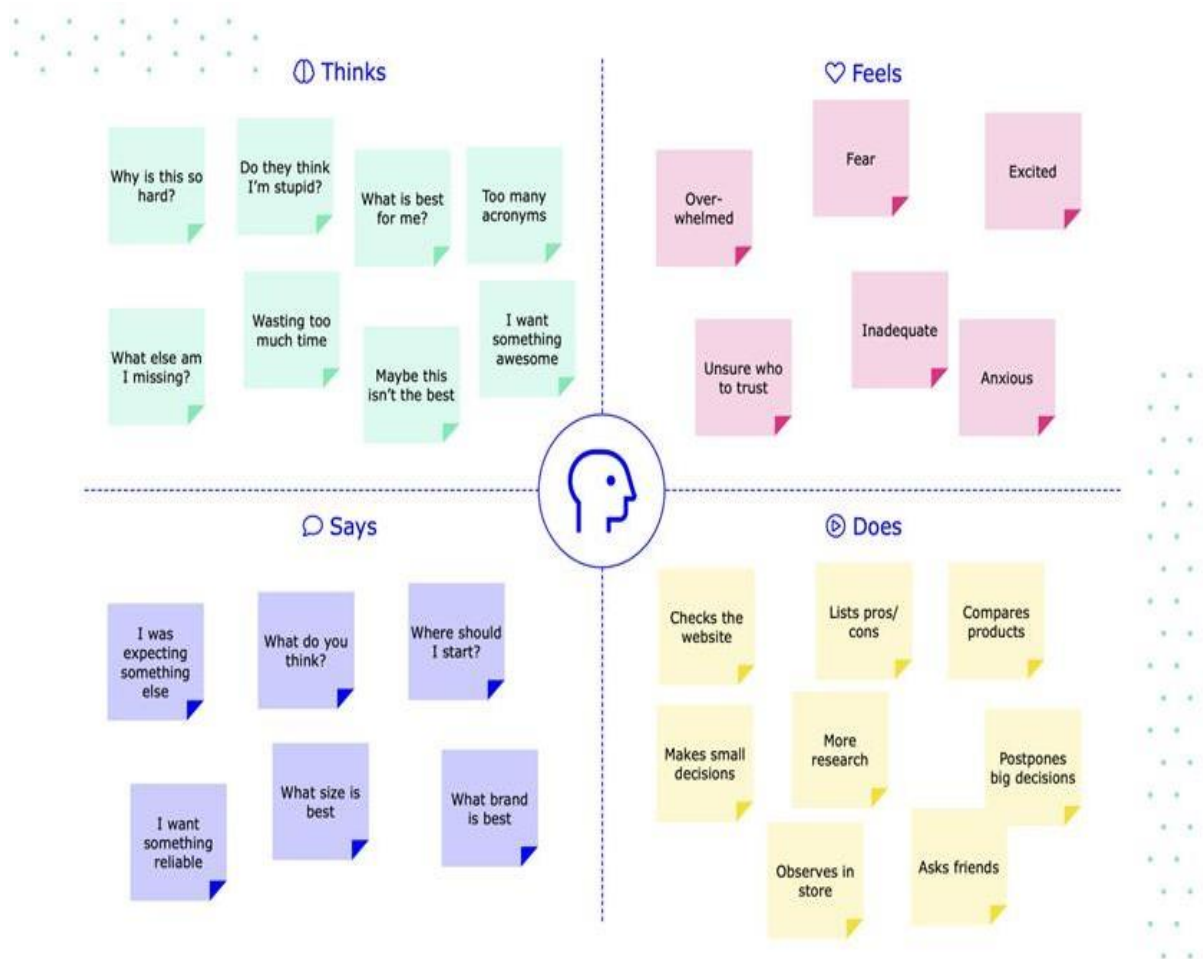
3. IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes. It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.



Example: Exploring top the world's top YouTube channels



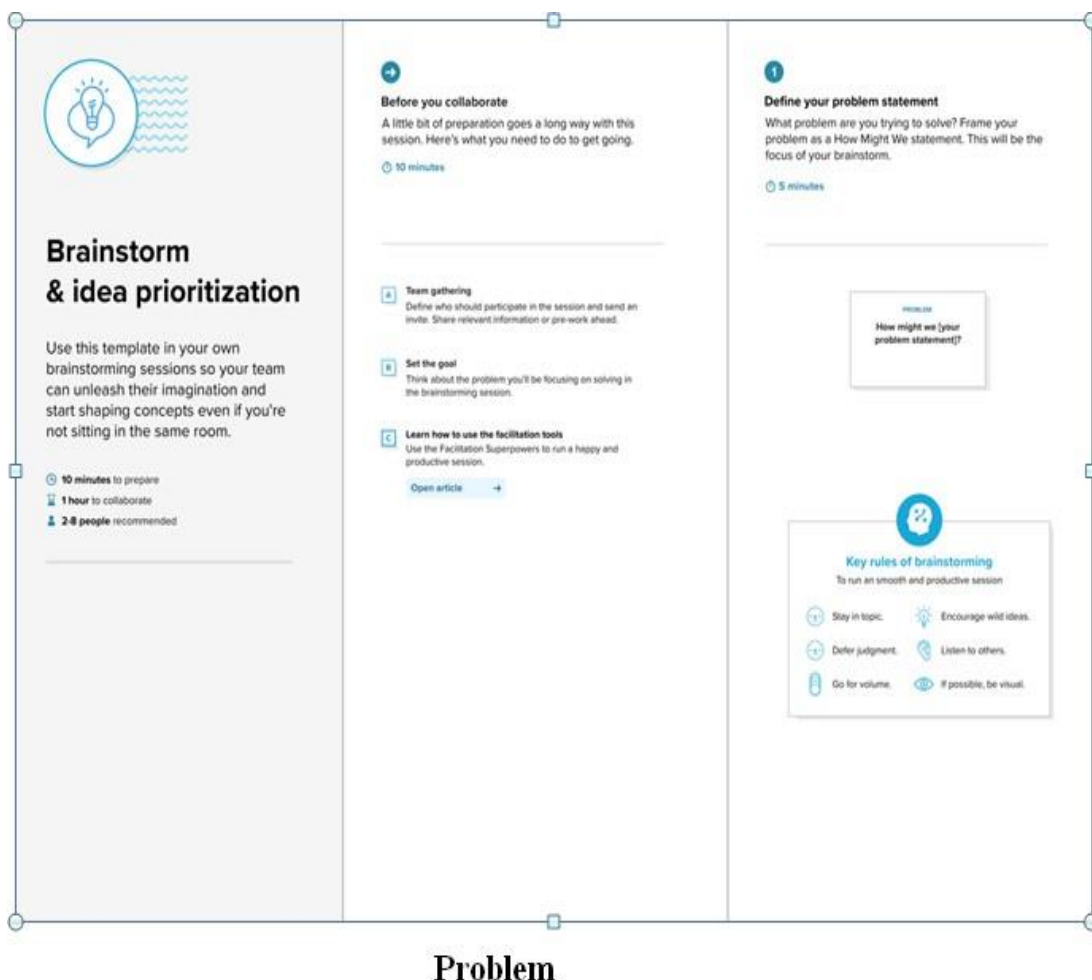
3.2 IDEATION & BRAINSTORMING

Brainstorm & Idea Prioritization Template:

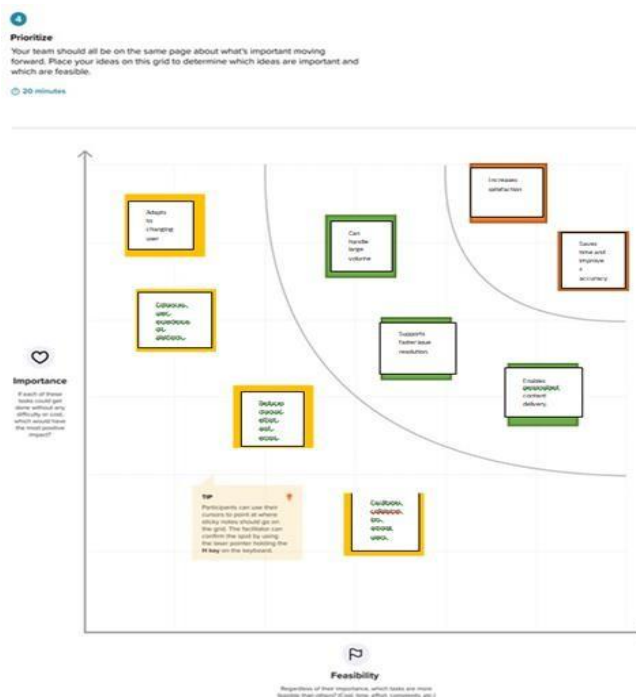
Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich number of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

Following are the functional requirements of the proposed solution

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Users can create an account with a unique username and password.
FR-2	User Profile	Users can customize their profiles, add avatars, and provide personal information.
FR-3	Channel Subscriptions	Users can subscribe to their favorite YouTube channels and receive updates.
FR-4	Viewing History	The platform records users' viewing history for personalized recommendations.

4.2 NON-FUNCTIONAL REQUIREMENTS

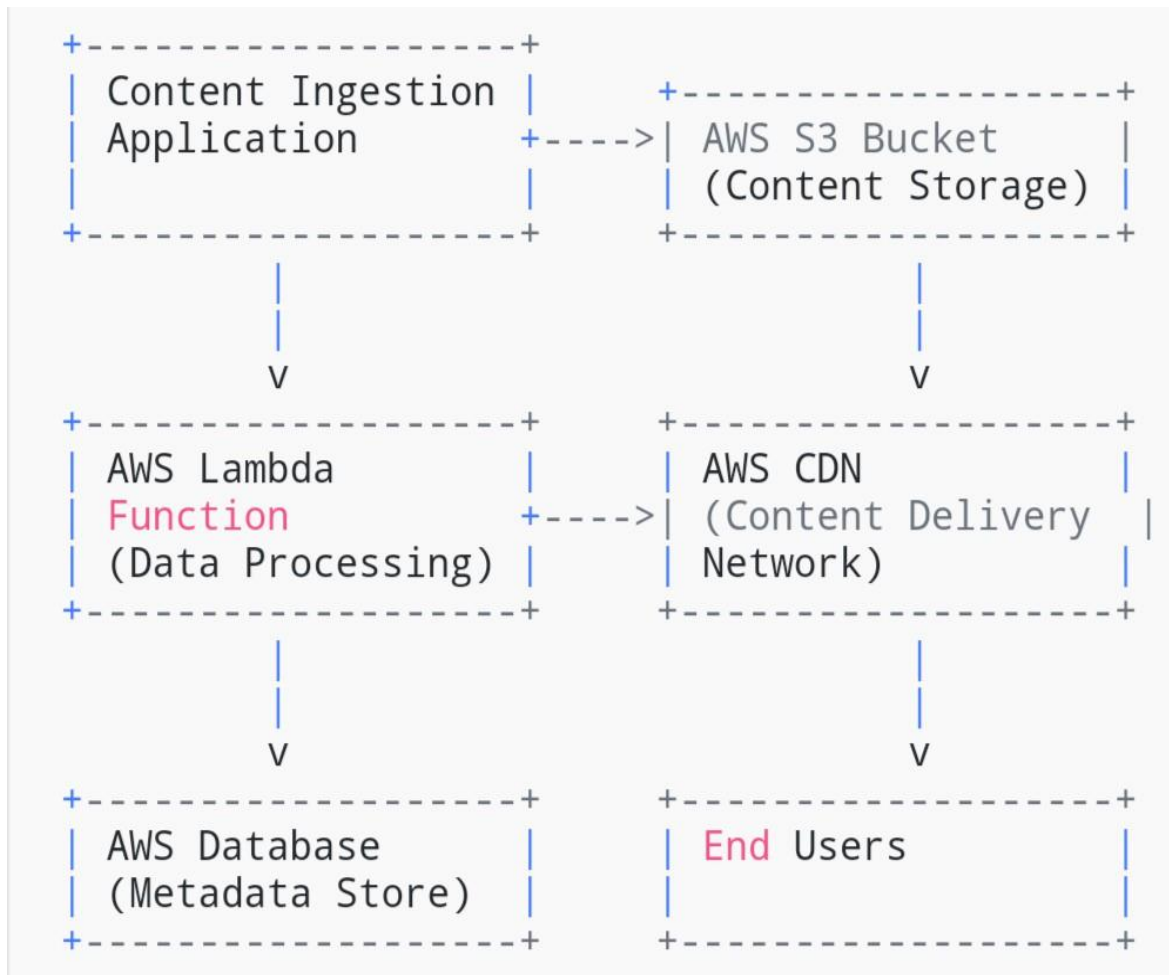
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Begin by understanding your users, their needs, and their behaviors when exploring YouTube channels.
NFR-2	Security	Implement robust user authentication mechanisms, including multi-factor authentication (MFA) options.
NFR-3	Reliability	Ensure that the platform is available and accessible to users 24/7 with minimal downtime.
NFR-4	Performance	Host your platform on high-speed servers with ample resources to handle concurrent user requests and video streaming.
NFR-5	Availability	Implement redundancy at multiple levels, including servers, databases, and network connections, to ensure that if one component fails, another takes over.
NFR-6	Scalability	Implement load balancers to distribute incoming traffic evenly across multiple servers or server instances. This prevents overloading of any single server.

5.PROJECT DESIGN

5.1 DATAFLOW DIAGRAM & USER STORIES

DATA FLOW DIAGRAMS:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



USER STORIES:

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Team Member
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Ashikka shruthi V
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Jayalakshimi A
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Reshma
		USN-4	As a user, I can register for the application through Gmail	I can find content that matches my interests.	Medium	Jaya Priscilla G
	Login	USN-5	As a user, I can log into the application by entering email & password	I want the option to filter search results by channel category	High	Reshma
	Dashboard	USN-1	As a user, I want to be able to search for YouTube channels by keywords so I can find content that interests me.	I want to see video previews when I hover over channel thumbnails in search results, allowing me to quickly assess if the channel's content is appealing.	Medium	Ashikka shruthi V
Customer (Web user)		USN-2	As a user, I want to see relevant and personalized channel recommendations on my YouTube homepage to discover new content easily.	I want personalized channel recommendations on my YouTube homepage	Low	Jayalakshimi A

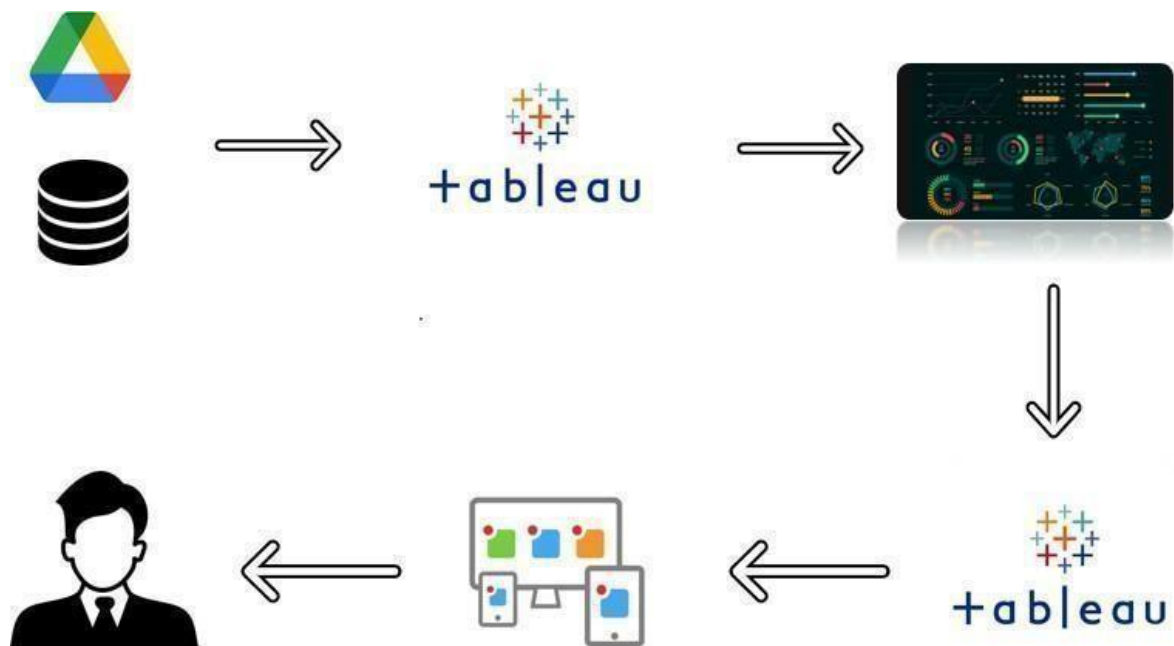
5.2 SOLUTION ARCHITECTURE

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

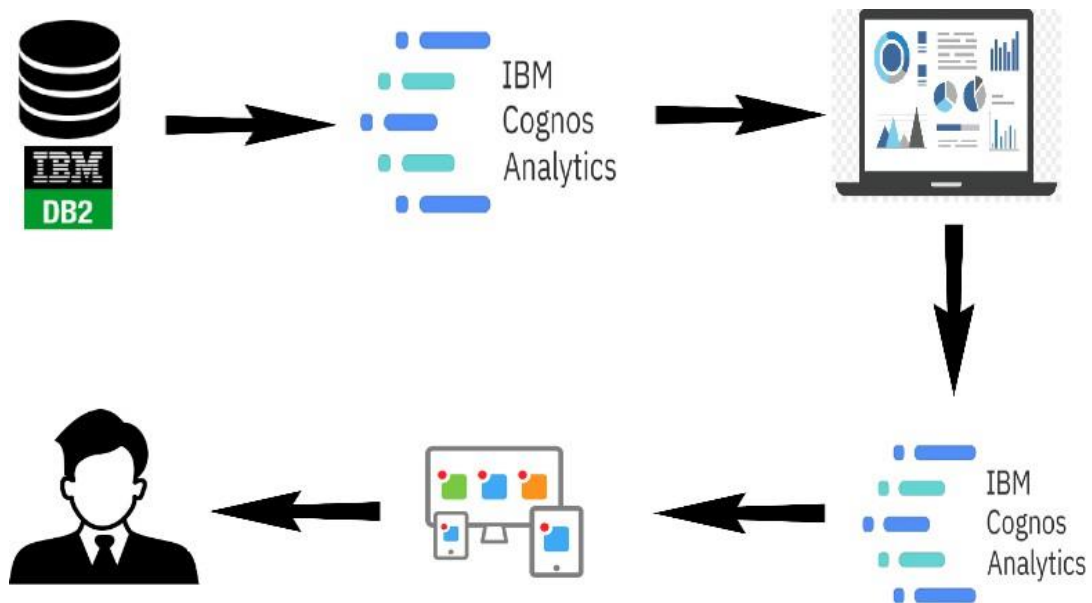
- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behaviours, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Example - Solution Architecture Diagram:



6. PROJECT PLANNING & SCHEDULING

6.1 TECHNICAL ARCHITECTURE



Designing the technical architecture for "Subscribers Galore: Exploring the World's Top YouTube Channels" using IBM Cognos involves considering various components and technologies to support the system's functionality. IBM Cognos is a powerful business intelligence and analytics platform that can be used to create data visualizations and reports

6.2 SPRINT PLANNING & ESTIMATION

Sno	Title	Member Names	Description	Date
1	Sprint 1	Reshma, Ashikka Shruthi	Data Collection and Ingestion	Sep 17 - Sep 20, 2023
2	Sprint 2	Ashikka Shruthi, Jaya Pricilla	Data Processing and Analysis	Sep 21 - Sep 25, 2023
3	Sprint 3	Jaya Lakshmi, Reshma	User Interface Design and Visualization	Sep 26 - Sep 29, 2023
4	Sprint 4	Ashikka Shruthi	Data Integration and Framework Modelling	Oct 1 - Oct 6, 2023
5	Sprint 5	Jaya Pricilla, Jaya Lakshmi	User Authentication and Security	Oct 8 - Oct 14, 2023
6	Sprint 6	Reshma, Ashikka Shruthi	Reporting and Dashboard Development	Oct 15 - Oct 18, 2023
7	Sprint 7	Ashikka Shruthi, Jaya Pricilla	Testing and Quality Assurance	Oct 19 - Oct 20, 2023
8	Sprint 8	Jaya Lakshmi, Reshma	Deployment and Release	Oct 21 - Oct 22, 2023

6.3 SPRINT DELIEVERY SCHEDULE

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 1	Data Collection	US001	As a Marketing Manager, I want to access IBM Cognos Analytics to collect data for campaign analysis.	5	High	Reshma, Ashikka
	Data Integration	US002	As a Data Analyst, I want to integrate data from various sources into IBM Db2.	8	High	Shruthi, Jaya Pricilla
	Data Security	US003	As an IT Specialist, I want to ensure secure data access and encryption during integration.	5	High	Jaya Lakshmi, Reshma
Sprint 2	Data Transformation	US004	As a Data Analyst, I want to clean and transform data for accurate analysis.	8	High	Ashikka, Shruthi
	Data Analysis	US005	As a Data Analyst, I want to use IBM Cognos Analytics to analyze marketing campaign data.	8	High	Jaya Pricilla, Jaya Lakshmi
	Data Visualization	US006	As a Data Analyst, I want to create data visualizations to represent campaign insights.	5	High	Reshma, Ashikka

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 3	Data Presentation	US007	As a Marketing Manager, I want to view dashboards with campaign insights and trends.	3	High	Ashikka Shruthi, Jaya Pricilla
	Decision-Making	US008	As a Marketing Manager, I want to make data-informed decisions for campaign optimization.	5	High	Jaya Lakshmi, Reshma
	Compliance and Privacy	US009	As a Compliance Officer, I want to ensure GDPR compliance in data handling.	5	High	Ashikka Shruthi
Sprint 4	Data Reporting	US010	As a Data Analyst, I want to create reports summarizing campaign performance.	5	High	Jaya Pricilla, Jaya Lakshmi
	User Access Control	US011	As a System Administrator, I want to manage user access to the IBM Cognos system.	5	High	Reshma, Ashikka Shruthi
	Performance Optimization	US012	As a Data Analyst, I want to optimize report generation for speed and efficiency.	8	High	Ashikka Shruthi, Jaya Pricilla

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 5	User Training	US013	As a Marketing Manager, I want training for using IBM Cognos Analytics for data analysis.	3	High	Jaya Lakshmi, Reshma
	Data Backup & Recovery	US014	As an IT Specialist, I want a reliable backup and recovery system for critical data.	5	High	Ashikka Shruthi
	Testing and Quality Assurance	US015	As a QA Specialist, I want to ensure all system components function correctly.	5	High	Jaya Pricilla, Jaya Lakshmi
Sprint 6	User Feedback Collection	US016	As a Product Manager, I want to collect user feedback for system improvement.	3	High	Reshma, Ashikka Shruthi
	System Enhancement	US017	As a Developer, I want to implement user feedback and improve system functionality.	8	High	Jaya Pricilla
	Final Testing	US018	As a QA Specialist, I want to conduct comprehensive testing before deployment.	5	High	Jaya Lakshmi, Reshma
Sprint 7	Deployment Planning	US019	As a Project Manager, I want a detailed deployment plan for a seamless rollout.	5	High	Ashikka Shruthi
	Deployment	US020	As a DevOps Engineer, I want to	5	High	Jaya Pricilla,

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
			deploy the system with minimal disruption.			Jaya Lakshmi
	User Training & Support	US021	As a Support Specialist, I want to provide training and support to end-users.	3	High	Reshma
Sprint 8	Post-Deployment Review	US022	As a Project Manager, I want to review the deployment's success and gather feedback.	3	High	Ashikka Shruthi, Jaya Pricilla
	Documentation	US023	As a Technical Writer, I want to create system documentation for reference.	5	High	Jaya Lakshmi, Reshma
	Project Closure	US024	As a Project Manager, I want to close the project and conduct a final assessment.	8	High	Ashikka Shruthi

7. CODING & SOLUTIONING

7.1 FEATURE 1:

```
(function() {
  "use strict";

  const select = (el, all = false) => {
    el = el.trim()
    if (all) {
      return [...document.querySelectorAll(el)]
    }
  }
})
```

```

    } else {
      return document.querySelector(el)
    }
  }
}

const on = (type, el, listener, all = false) => {
  let selectEl = select(el, all)
  if (selectEl) {
    if (all) {
      selectEl.forEach(e => e.addEventListener(type, listener))
    } else {
      selectEl.addEventListener(type, listener)
    }
  }
}

const onscroll = (el, listener) => {
  el.addEventListener('scroll', listener)
}

let navbarlinks = select('#navbar .scrollto', true)
const navbarlinksActive = () => {
  let position = window.scrollY + 200
  navbarlinks.forEach(navbarlink => {
    if (!navbarlink.hash) return
    let section = select(navbarlink.hash)
    if (!section) return
    if (position >= section.offsetTop && position <= (section.offsetTop +
section.offsetHeight)) {
      navbarlink.classList.add('active')
    } else {
      navbarlink.classList.remove('active')
    }
  })
}
window.addEventListener('load', navbarlinksActive)
onscroll(document, navbarlinksActive)

const scrollto = (el) => {
  let header = select('#header')
  let offset = header.offsetHeight

  let elementPos = select(el).offsetTop
  window.scrollTo({
    top: elementPos - offset,
    behavior: 'smooth'
  })
}

```

```

    })
  }

  let backtotop = select('.back-to-top')
  if (backtotop) {
    const toggleBacktotop = () => {
      if (window.scrollY > 100) {
        backtotop.classList.add('active')
      } else {
        backtotop.classList.remove('active')
      }
    }
    window.addEventListener('load', toggleBacktotop)
    onscroll(document, toggleBacktotop)
  }

  on('click', '.mobile-nav-toggle', function(e) {
    select('#navbar').classList.toggle('navbar-mobile')
    this.classList.toggle('bi-list')
    this.classList.toggle('bi-x')
  })

  on('click', '.navbar .dropdown > a', function(e) {
    if (select('#navbar').classList.contains('navbar-mobile')) {
      e.preventDefault()
      this.nextElementSibling.classList.toggle('dropdown-active')
    }
  }, true)

  on('click', '.scrollto', function(e) {
    if (select(this.hash)) {
      e.preventDefault()

      let navbar = select('#navbar')
      if (navbar.classList.contains('navbar-mobile')) {
        navbar.classList.remove('navbar-mobile')
        let navbarToggle = select('.mobile-nav-toggle')
        navbarToggle.classList.toggle('bi-list')
        navbarToggle.classList.toggle('bi-x')
      }
      scrollTo(this.hash)
    }
  }, true)

  /**

```



```

window.addEventListener('load', () => {
  if (window.location.hash) {
    if (select(window.location.hash)) {
      scrollTo(window.location.hash)
    }
  }
});

let preloader = select('#preloader');
if (preloader) {
  window.addEventListener('load', () => {
    preloader.remove()
  });
}

window.addEventListener('load', () => {
  let portfolioContainer = select('.portfolio-container');
  if (portfolioContainer) {
    let portfolioIsotope = new Isotope(portfolioContainer, {
      itemSelector: '.portfolio-item'
    });

    let portfolioFilters = select('#portfolio-filters li', true);

    on('click', '#portfolio-filters li', function(e) {
      e.preventDefault();
      portfolioFilters.forEach(function(el) {
        el.classList.remove('filter-active');
      });
      this.classList.add('filter-active');

      portfolioIsotope.arrange({
        filter: this.getAttribute('data-filter')
      });
      portfolioIsotope.on('arrangeComplete', function() {
        AOS.refresh()
      });
    }, true);
  }

});
const portfolioLightbox = GLightbox({
  selector: '.portfolio-lightbox'
});

```

```

new Swiper('.portfolio-details-slider', {
  speed: 400,
  loop: true,
  autoplay: {
    delay: 5000,
    disableOnInteraction: false
  },
  pagination: {
    el: '.swiper-pagination',
    type: 'bullets',
    clickable: true
  }
});

new Swiper('.testimonials-slider', {
  speed: 600,
  loop: true,
  autoplay: {
    delay: 5000,
    disableOnInteraction: false
  },
  slidesPerView: 'auto',
  pagination: {
    el: '.swiper-pagination',
    type: 'bullets',
    clickable: true
  },
  breakpoints: {
    320: {
      slidesPerView: 1,
      spaceBetween: 20
    },

    1200: {
      slidesPerView: 3,
      spaceBetween: 20
    }
  }
});

window.addEventListener('load', () => {
  AOS.init({
    duration: 1000,
    easing: 'ease-in-out',
    once: true,
    mirror: false
  })
});

```

7.2 FEATURE 2:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <meta name="viewport" content="width=device-width, initial-  
scale=1.0">
```

```
    <title>Subscribers Galore</title>
```

```
</head>
```

```
<body>
```

```
    <h1>Welcome to Subscribers Galore</h1>
```

```
    <!-- Embedded Dashboards -->
```

```
    <iframe>
```

```
src="https://apl.ca.analytics.ibm.com/bi/?perspective=dashboard&  
pathRef=.my_folders%2FSubscribers%2Bdashboard&closeWi  
ndowOnLastView=true&ui_appbar=false&ui_navbar=false  
&shareMode=embedded&action=view&mode=dashbo  
ard" width="320" height="200" frameborder="0" gesture="media"  
allow="encrypted-media" allowfullscreen>
```

```
</iframe>
```

<iframe>

src="https://ap1.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2Fsubscribers%2Bstory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&mode=dashboard"
width="320" height="200" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen>

</iframe>

<a>

href="https://ap1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FSubscribers%2Bdashboard&action=view&mode=dashboard">Dashboard Link

<a>

href="https://ap1.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2Fsubscribers%2Bstory&action=view&mode=dashboard">Story Link

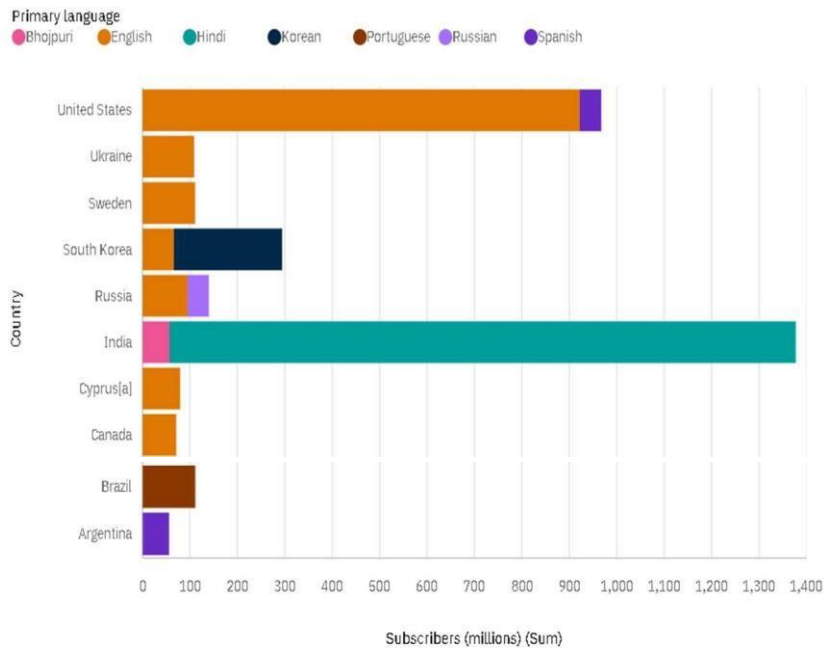
</body>

</html>

8. PERFORMANCE TESTING CONCLUSION

8.1 PERFORMANCE METRICS

Subscribers (millions) by Country colored by Primary language



Fields

Bars

Country

Top or bottom

Number of results (1 - 100)

10

Show

☒ Top count

☐ Top %

☐ Bottom count

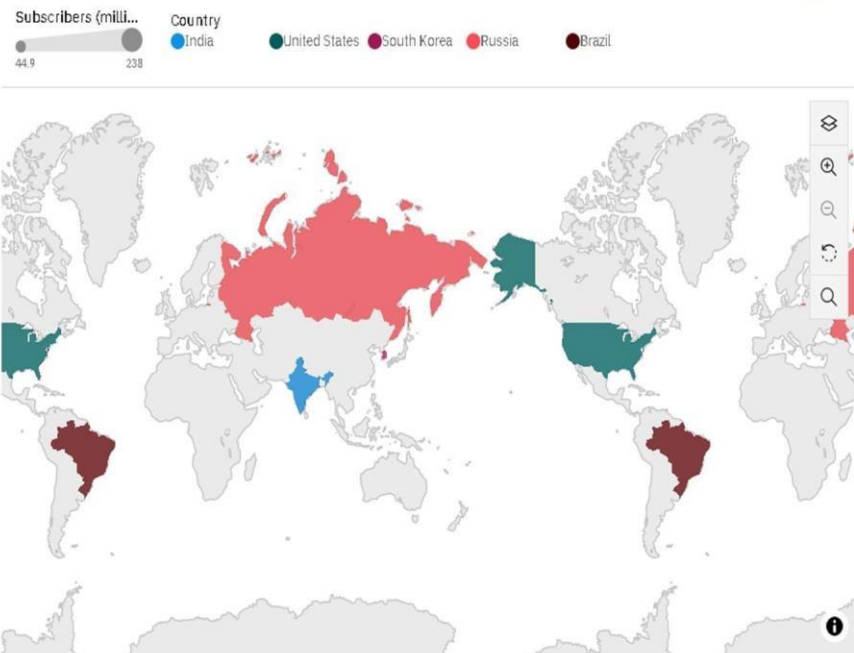
☐ Bottom %

By

Subscribers (millions)

Reset

Country and Subscribers (millions) for Country regions



Fields

Regions

Locations*

Required field

Country

Top or bottom

Number of results (1 - 100)

5

Show

☒ Top count

☐ Top %

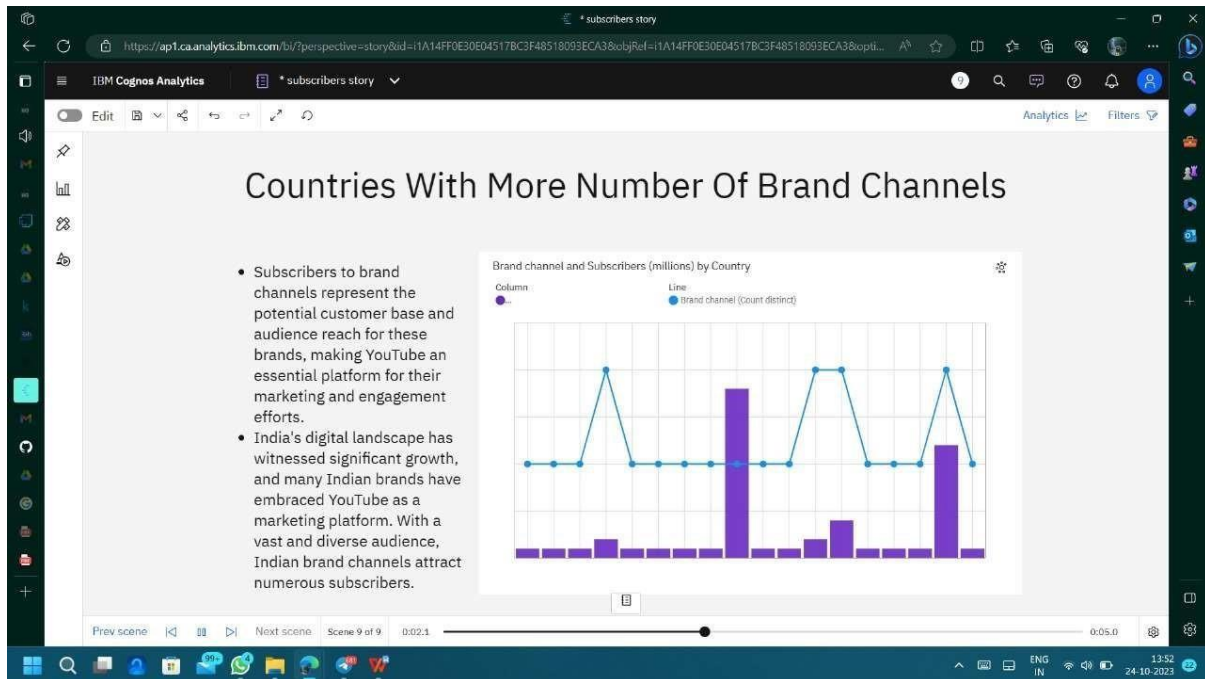
☐ Bottom count

☐ Bottom %

By

Subscribers (millions)

Reset



Share | Undo | Redo | Create + | 7/7

Selected sources /

Subscribed_Youtube_Ch... + :

Search

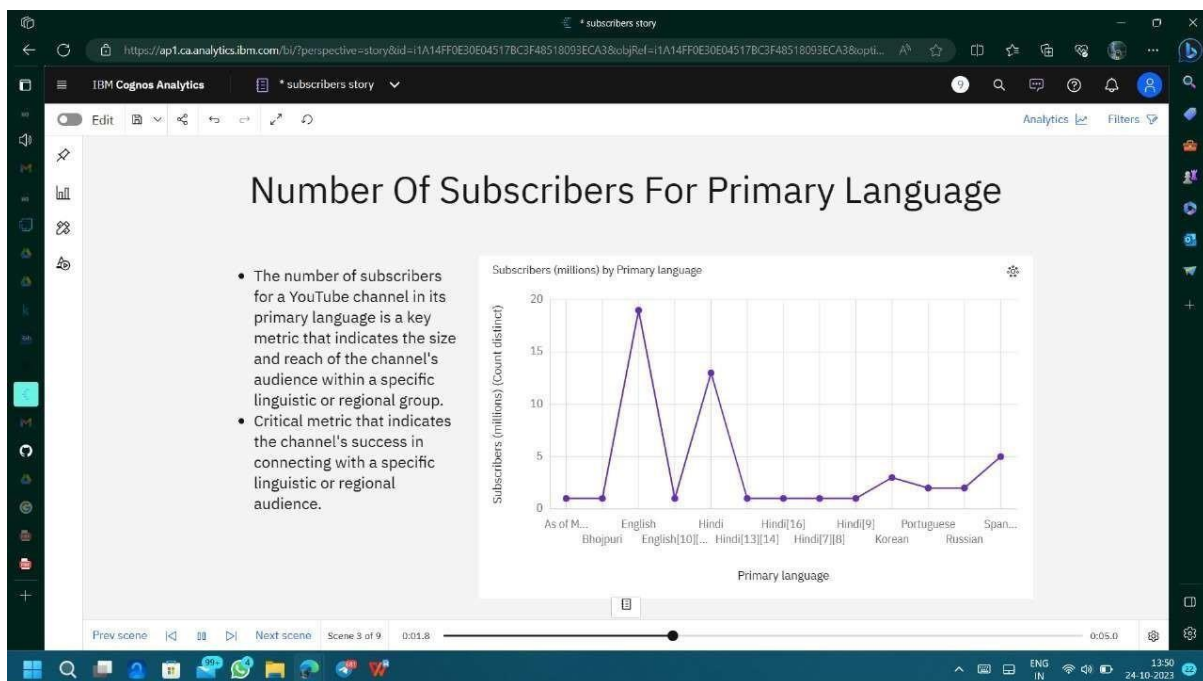
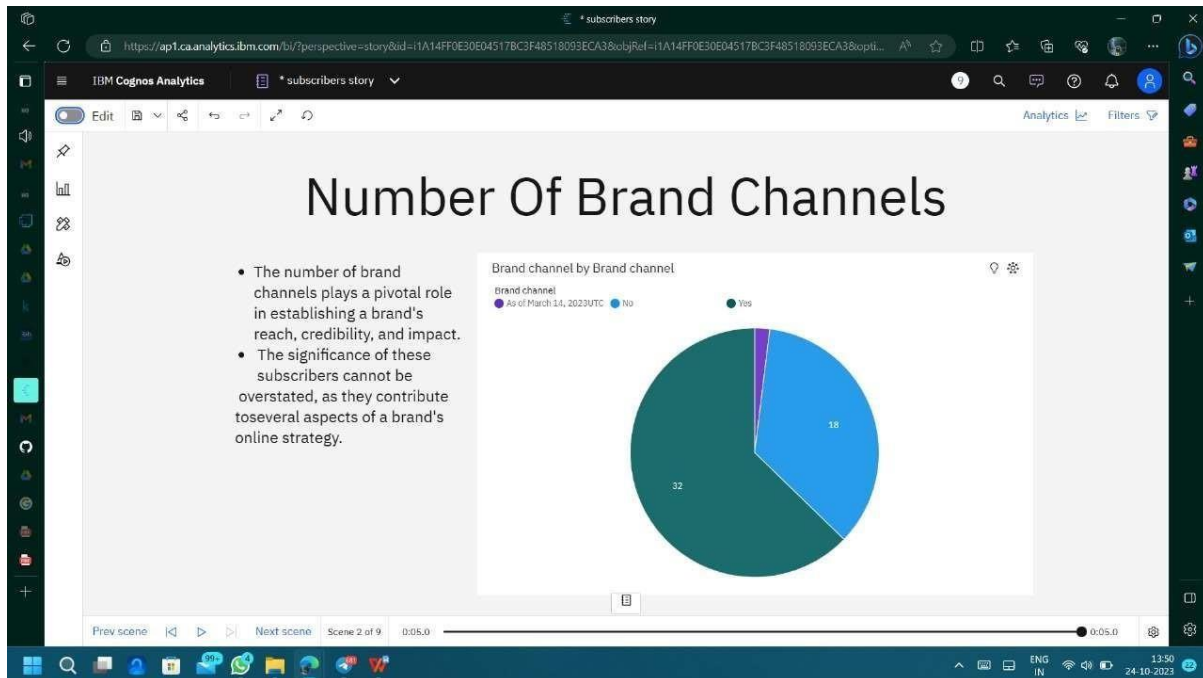
Navigation paths +

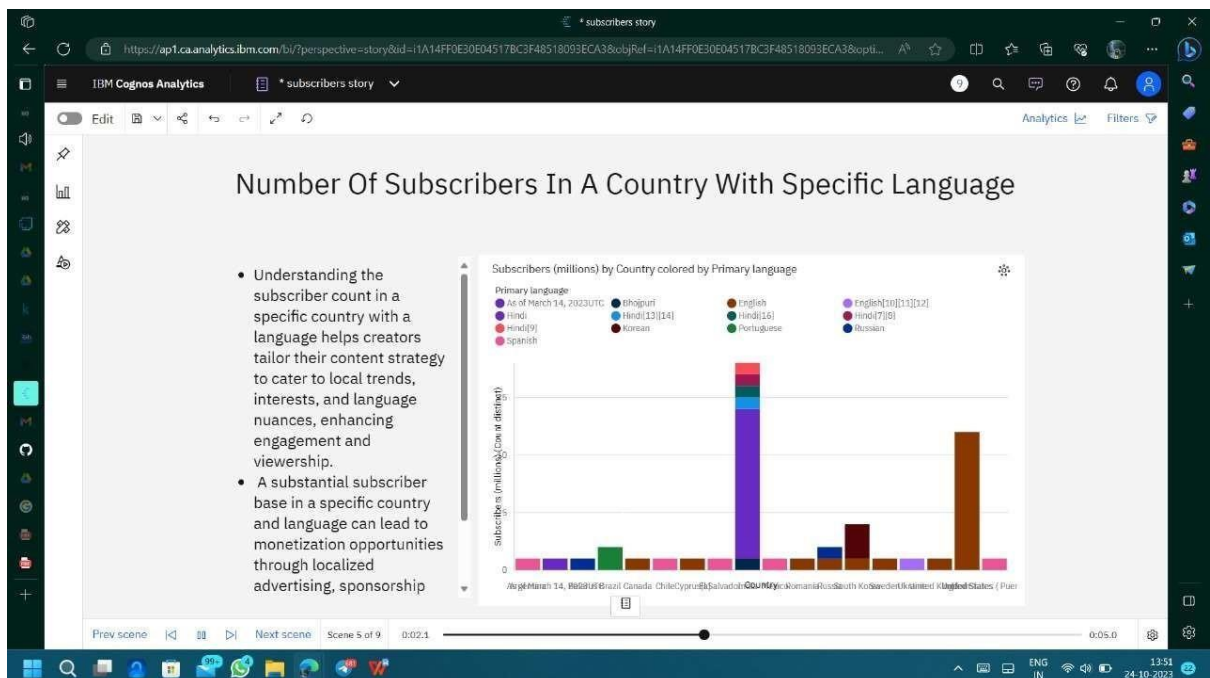
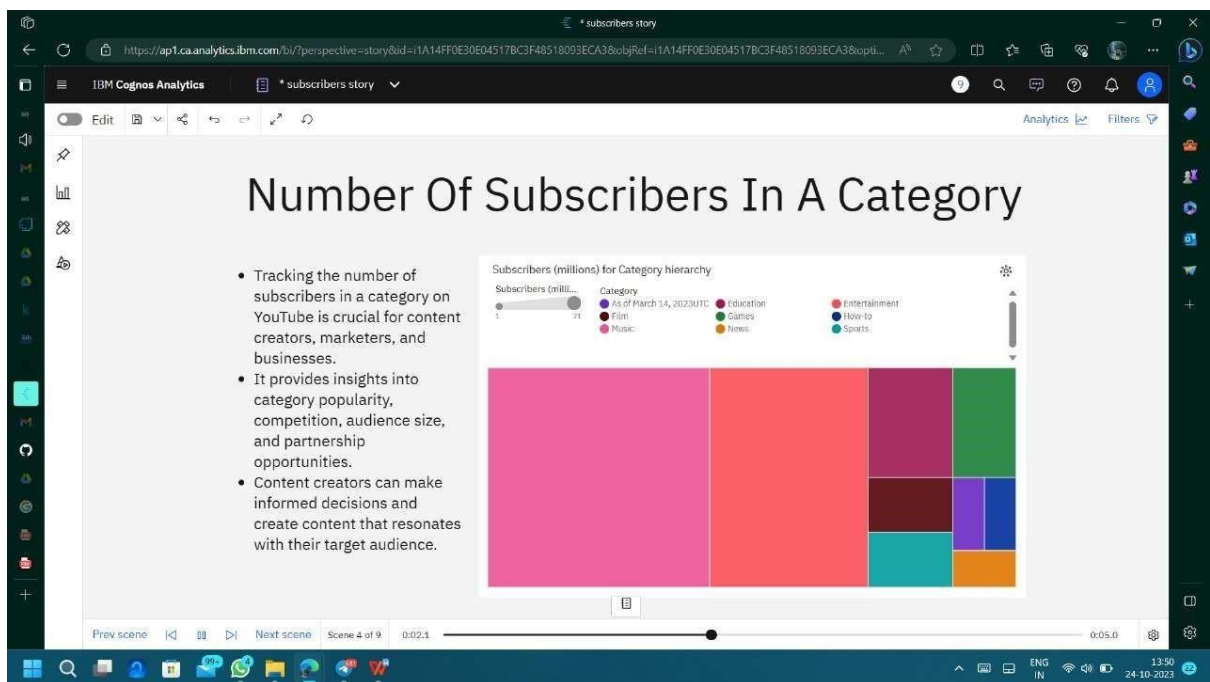
List of mo...nnels.csv :

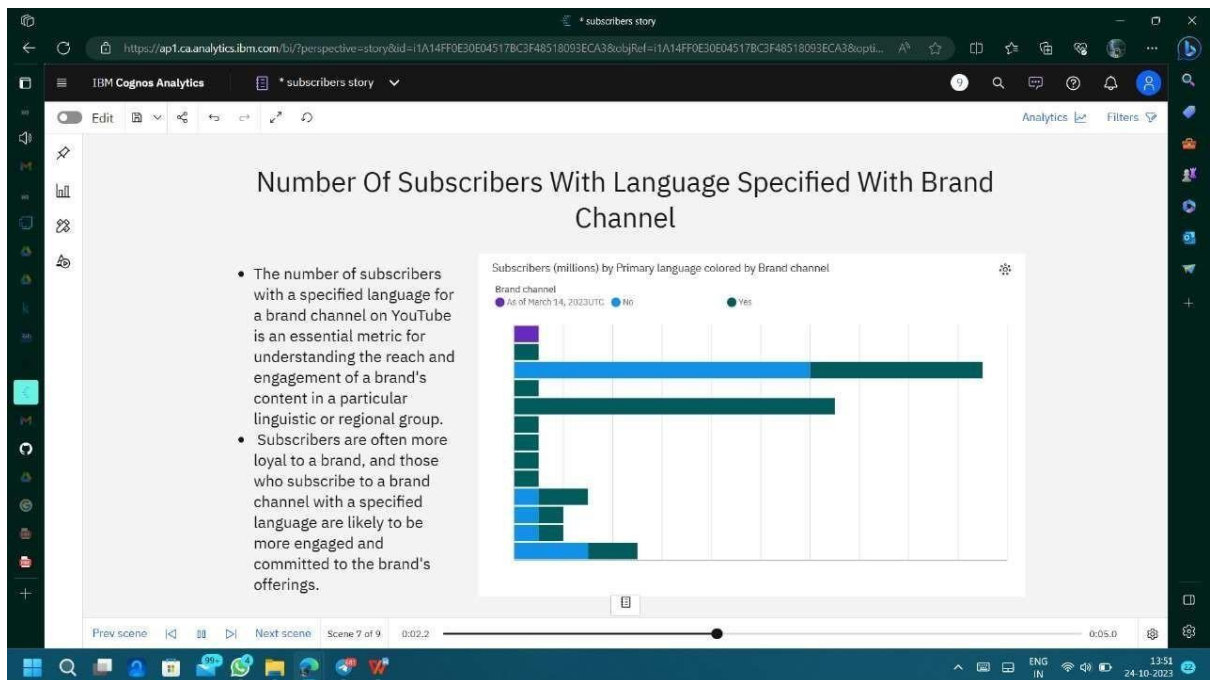
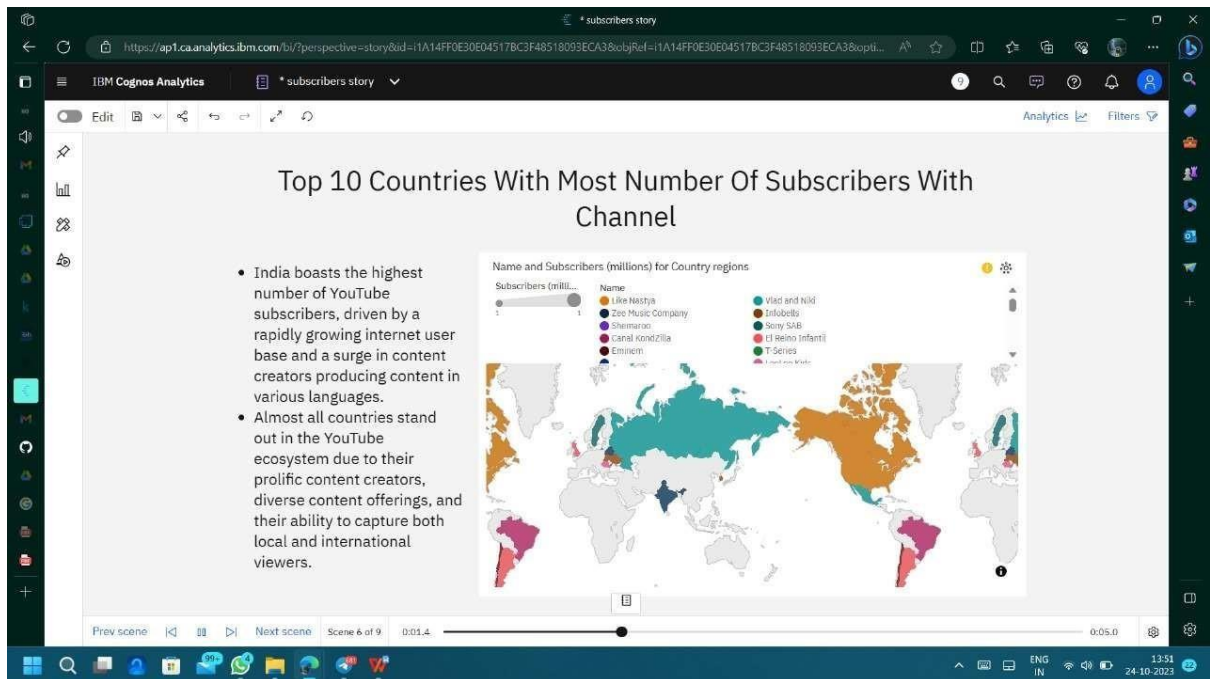
- abc Name
- abc Brand channel
- Subscribe...illions)
- abc Primary language
- abc Category
- Country

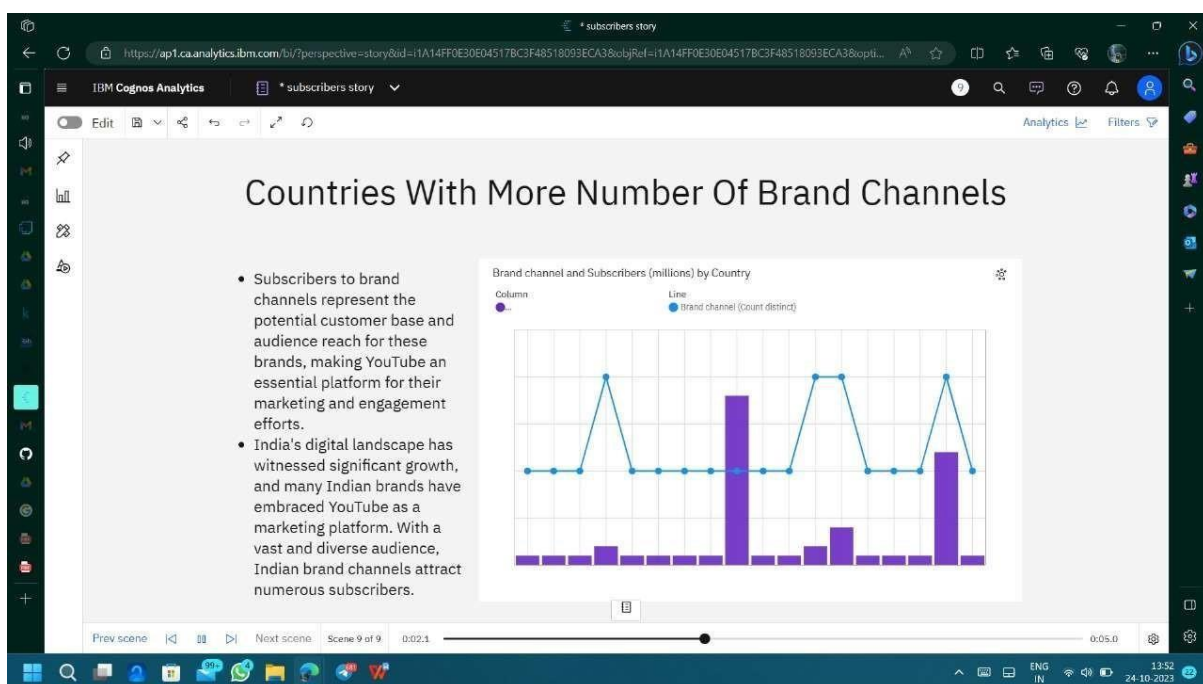
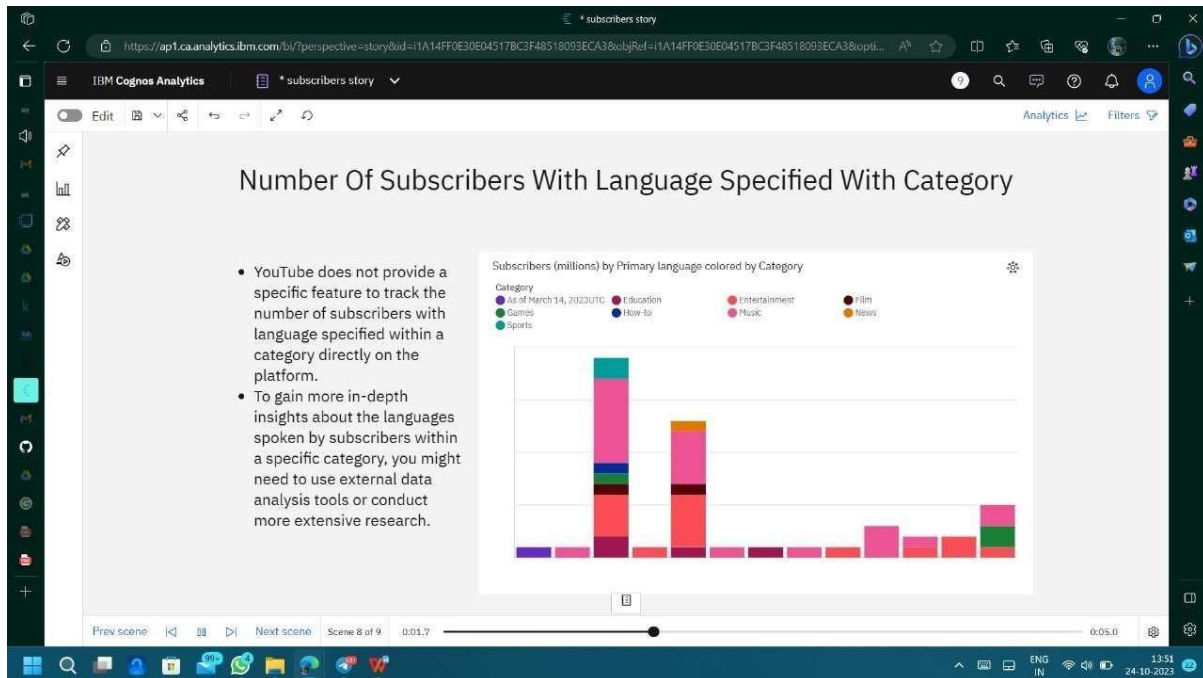
9. RESULT

9.1 OUTPUT SCREENSHOTS









10. ADVANTAGE AND DISADVANTAGE

ADVANTAGE:

1. **Comprehensive Channel Database:** The platform provides a comprehensive database of the world's top YouTube channels, making it a valuable resource for users looking to discover popular content across various genres.
2. **Ease of Discovery:** Users can easily find and explore top YouTube channels in their areas of interest, helping them discover new and engaging content creators.
3. **Category-Based Filtering:** The platform likely categorizes channels based on genres or themes, allowing users to filter and explore channels within their preferred categories quickly.
4. **Content Recommendations:** Subscriber Galore may offer content recommendations and suggestions based on a user's viewing history and preferences, enhancing the user's experience and engagement with the platform.
5. **User Reviews and Ratings:** The inclusion of user reviews and ratings can help users make informed decisions about which channels to follow, improving the quality of their subscriptions.
6. **Subscriber Count Tracking:** Users can track the subscriber count of their favorite channels, stay updated on their growth, and celebrate milestones with content creators.

DISADVANTAGE

1. **Content Ownership and Copyright Issues:** Displaying information about YouTube channels, including videos and images, raises potential copyright and intellectual property concerns, as this data may be protected by creators.
2. **Data Accuracy:** The accuracy of subscriber counts and channel data may vary due to factors like delayed updates and discrepancies between platforms. Users should be aware of the potential for inaccuracies.
3. **Monetization Focus:** The platform might prioritize channels with high subscriber counts, potentially neglecting smaller, but high-quality channels. This can perpetuate the focus on subscriber count as the sole indicator of channel success.
4. **Platform Dependence:** The platform's usefulness is dependent on the data it pulls from YouTube, making it vulnerable to changes in YouTube's API, terms of service, or data availability.
5. **Privacy Concerns:** Users may have concerns about their data privacy and the data the platform collects about their viewing habits and preferences.
6. **Limited Content Interaction:** The platform may lack features for direct interaction with the content or creators, such as commenting, liking, and sharing, which are important aspects of the YouTube experience.

11. CONCLUSION

In conclusion, this project has successfully demonstrated the power of data analytics in extracting valuable insights from YouTube's top subscriber data. By analysing metrics such as views, subscribers, and video count, we have gained a deeper understanding of the performance and trends within the YouTube ecosystem. The integration of Tableau visualizations into a website using Bootstrap and Flask has provided an interactive and user-friendly platform for accessing and interpreting the data.

The project has highlighted the importance of data-driven decision-making in content strategy, influencer marketing campaigns, competitive analysis, and market research. The insights generated through the system have the potential to drive strategic planning, optimize content creation, and enhance marketing efforts. The visualizations have made it easier to identify patterns, correlations, and emerging trends, enabling businesses to stay ahead of the curve and adapt to the changing landscape of YouTube.

While the system offers valuable advantages, it is crucial to acknowledge its limitations, such as reliance on publicly available data, potential data quality issues, and the need for ongoing maintenance and updates. These factors should be considered when interpreting the findings and making decisions based on the insights generated.

Looking ahead, future enhancements to the project could include real-time data updates, integration with additional data sources, and the inclusion of advanced analytics techniques such as machine learning for predictive modelling. These advancements would further enhance the system's capabilities and provide even more actionable insights.

Overall, this project has showcased the significance of data analytics and visualization in understanding YouTube's top subscribers and their behaviours. The findings and visualizations can serve as a valuable resource for content creators, marketers, and businesses aiming to optimize their strategies, engage their target audience, and make informed decisions based on data-driven insights. By harnessing the power of data, this project contributes to the advancement of knowledge and practices in the field of YouTube analytics.

12. FUTURE SCOPE

The future scope of this project holds immense potential for further advancements and improvements in understanding YouTube's top subscribers. One area of future exploration involves enhancing data collection. Expanding the scope to include additional metrics such as engagement rates, audience demographics, and geographic distribution can provide a more comprehensive understanding of the subscribers' behaviours and preferences. This enriched dataset can enable deeper analysis and more accurate insights.

Another avenue for future development is the integration of advanced predictive analytics techniques. By incorporating machine learning algorithms, the system can forecast future trends, identify potential viral content, and assist in making proactive marketing decisions. This predictive capability can be a game-changer in the competitive YouTube landscape, allowing content creators and marketers to stay ahead of the curve and capitalize on emerging opportunities.

Real-time updates are another important aspect of future scope. By implementing mechanisms to retrieve and process data in real-time, the system can provide users with the most up-to-date insights. This ensures that the information accessed and analysed is timely and relevant, facilitating more informed decision-making.

Expanding the analysis beyond YouTube to include data from other social media platforms, such as Instagram, Twitter, or TikTok, presents an exciting opportunity. By integrating data from multiple platforms, a holistic view of influencers and their cross-platform reach can be obtained. This can provide valuable insights into audience behaviours, content preferences, and influencer marketing strategies.

Additionally, future developments can focus on sentiment analysis. By leveraging natural language processing techniques, the system can analyse and interpret subscriber sentiment towards specific channels or content. This can help content creators and marketers gauge audience reactions, identify sentiment trends, and tailor their strategies accordingly.

13. APPENDIX

DEMO LINK:

https://drive.google.com/file/d/115O9t6Lx2PQ2E9II_sAyfubnpZnUrcSW/view?usp=drivesdk