



Youtube Sentiment Analyser

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Project Guide
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Outline

- Introduction
- Literature Survey of the existing systems
- Limitations of the existing systems
- Problem statement
- System Design
- Technologies and methodologies
- Implementation
- Conclusion
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Introduction

- The growing influence of digital content, YouTube has emerged as a dominant platform for creators and audiences alike.
- The YouTube Sentiment Analyser offers a solution by providing insights into channel performance, suggesting optimized video titles, and analyzing viewer sentiments through comments.
- In addition, it includes a video summarizer to help both creators and viewers quickly grasp the key points of lengthy videos.
- This comprehensive tool empowers content creators to enhance their strategies and connect more effectively with their audiences.

Introduction

1.1 MOTIVATION :

- The primary motivation behind this project stems from the need to simplify the feedback analysis process for YouTube creators.
- The difficulty for creators in analyzing large volumes of comments, leading to missed valuable feedback.
- The need for a reliable way to track channel performance trends over time.
- They struggle to create engaging titles that capture audience attention.

Introduction

1.2 Objectives :

- To analyze comments by classifying them as positive, negative, or neutral for better feedback understanding using Naïve Bayes algorithm.
- To track growth by analyzing and comparing channel performance over time.
- To recommend engaging video titles based on descriptions and categories using T5 Transformer.
- To summarize videos by providing brief summaries to save viewer's time.

Literature Survey of the existing system

| Sr No | Title | Author | Year | Outcomes | Methodology | Result |
|-------|---|---|-------------|---|--|---|
| 1 | [1] Sentimet Analysis for YouTube Videos with User Comment | Rawan Fahad Alhujaili, Wael M.S. Yafooz | 30 Nov 2021 | Provides insights into user opinions by classifying comments into positive, negative, or neutral. Improves content strategy and engagement by understanding viewer sentiment. | Applies natural language processing (NLP) and machine learning techniques. Evaluates various sentiment classification models for accuracy. | Offers valuable insights for enhancing content strategy and audience interaction. Addresses challenges in sentiment analysis and recommends effective models. |

Literature Survey of the existing system

| Sr No. | Title | Author | Year | Outcomes | Methodology | Result |
|--------|---|---|-------------|--|--|--|
| 2 | [2] A Classification Scheme for Content Analyses of YouTube Video Comment | Amy Madden, Ian Ruthven, David McMenemy | 2 Sept 2013 | Develops a classification scheme to categorize YouTube comments into ten broad categories and 58 subcategories. Helps understand various communicative purposes of comments. | Analyzes 66,637 comments to create a detailed classification schema. | Provides a structured approach for analyzing and mining user generated content. Useful for researchers in various disciplines studying YouTube comments. |

Literature Survey of the existing system

| Sr No. | Title | Author | Year | Outcomes | Methodology | Result |
|--------|---|---|-------------|--|---|---|
| 3 | [3] Engagement and Populariy Dynamics of YouTube Videos and Sensitivi y to Meta Data | William Hoiles, Anup Aprem, Vikram Krishnn murthy | 1 July 2017 | Examines how meta-level features (title, tag, thumbnail, description) and social dynamics affect YouTube video popularity. Identifies key features influencing view counts and suggests optimization strategies. | Uses real-world data of 6 million videos and 25 thousand channels. Analyzes the impact of meta level features and social dynamics | Provides insights into optimizing video meta data for increased popularity. Highlights the relationship between views and subscribers, and the effects of scheduling and playthrough. |

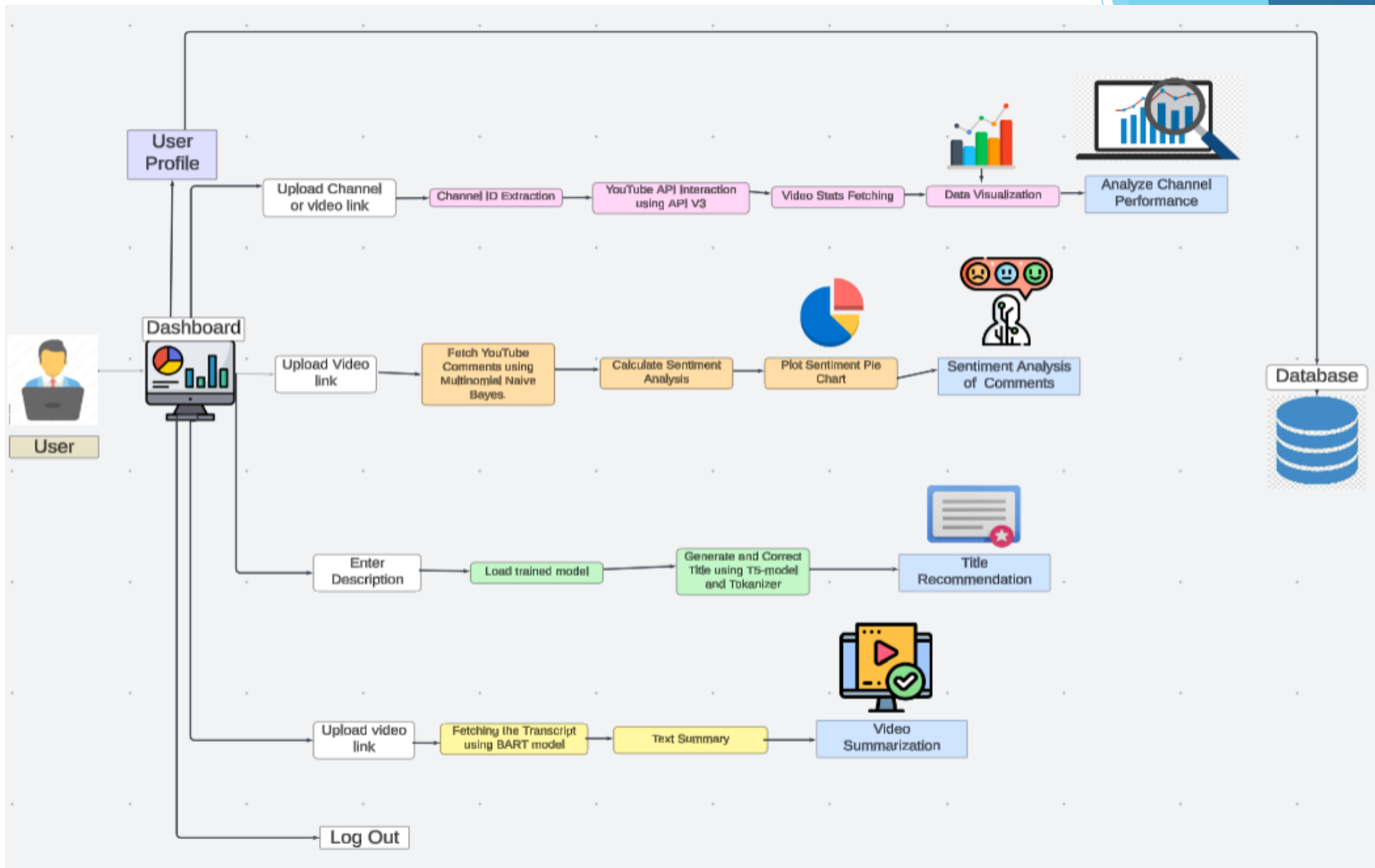
Limitations of existing systems

- In sentiment Analysis, Naive Bayes assumes independence among features, which can limit accuracy in complex sentiment tasks.
- External factors like trending topics or algorithm changes can cause fluctuations in growth tracking, making consistent tracking difficult.
- The T5 transformer might struggle to generate engaging and context-appropriate titles, especially for niche or complex topics.

Problem statement

- Creators struggle to quickly gauge audience reactions due to the large volume of comments, leading to difficulty in analyzing user's sentiment.
- Creators lack tools to consistently track and analyze channel performance, making informed decisions harder.
- Generating engaging video titles and summaries is tedious, leading to missed opportunities for content optimization.
- Viewers and creators need a way to provide and access concise video summaries, making content more accessible and to get the overview of the content before watching.

System Design



Technologies and methodologies

- **Front-End :**

1. HTML
2. CSS
3. JS (Javascript)


- **Back-End :**

1. MySQL
2. Flask

- **Algorithms & Models :**

1. Multinomial Naive Bayes (MultinomialNB) Algorithm
2. YouTube Data API v3 Model
3. T5 -(Text-To-Text Transfer Transformer) model
4. BART (Bidirectional and Auto-Regressive Transformers) model

Implementation



New here?
Sign up to create an account.

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SIGN IN

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Or sign in with:


[f](#) [t](#) [G](#) [in](#)


Implementation

Profile updated successfully!



Save Changes

Name: 

Email: 


Forget Password Set Password


History Logout


Implementation




 Home

 Profile

 Features

 Feedback

 Logout



Sentiment Analysis

Analyze and interpret emotional tone behind words.

Get Started1



Video Summarizer

Automate the process of summarizing video content.

Get Started2



Channel Analyzer

Evaluate performance and engagement metrics of video channels.

Get Started3



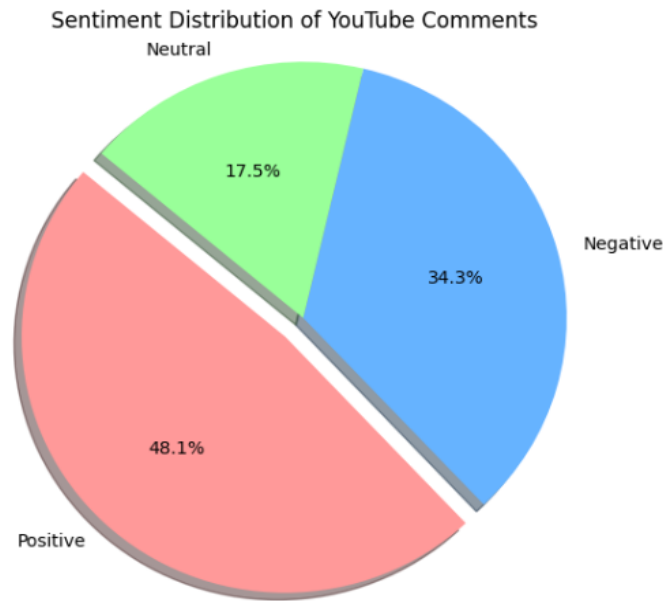
Title Recommendation

Generate effective and engaging titles for videos.

Get Started4

Implementation

Sentiment Analysis Results for Video ID: hIGoQC332VM



Positive: 48.12903225806451%

Negative: 34.32258064516129%

Neutral: 17.548387096774192%

Implementation

YouTube Channel Statistics



Apna College

| Subscribers Count | Views Count | Total Videos | Created Date |
|-------------------|-------------|--------------|--------------|
| 5960000 | 939770592 | 860 | 2020-08-05 |



Recent Videos



Pointers in C++ | In Detail |
DSA Series by Shradha
Ma'am



Product of Array Except Self |
Brute to Optimal Solution |
Leetcode 238



Container with Most Water
Problem | Brute & Optimal
Solution | Two Pointer
Approach - Leetcode 11



Buy and Sell Stock Problem
and Pow(X,N) Power
exponential Problem -
Leetcode | DSA Series



Time & Space Complexity -
DSA Series by Shradha
Ma'am

Implementation

YouTube Transcript Summarizer

YouTube Video ID:

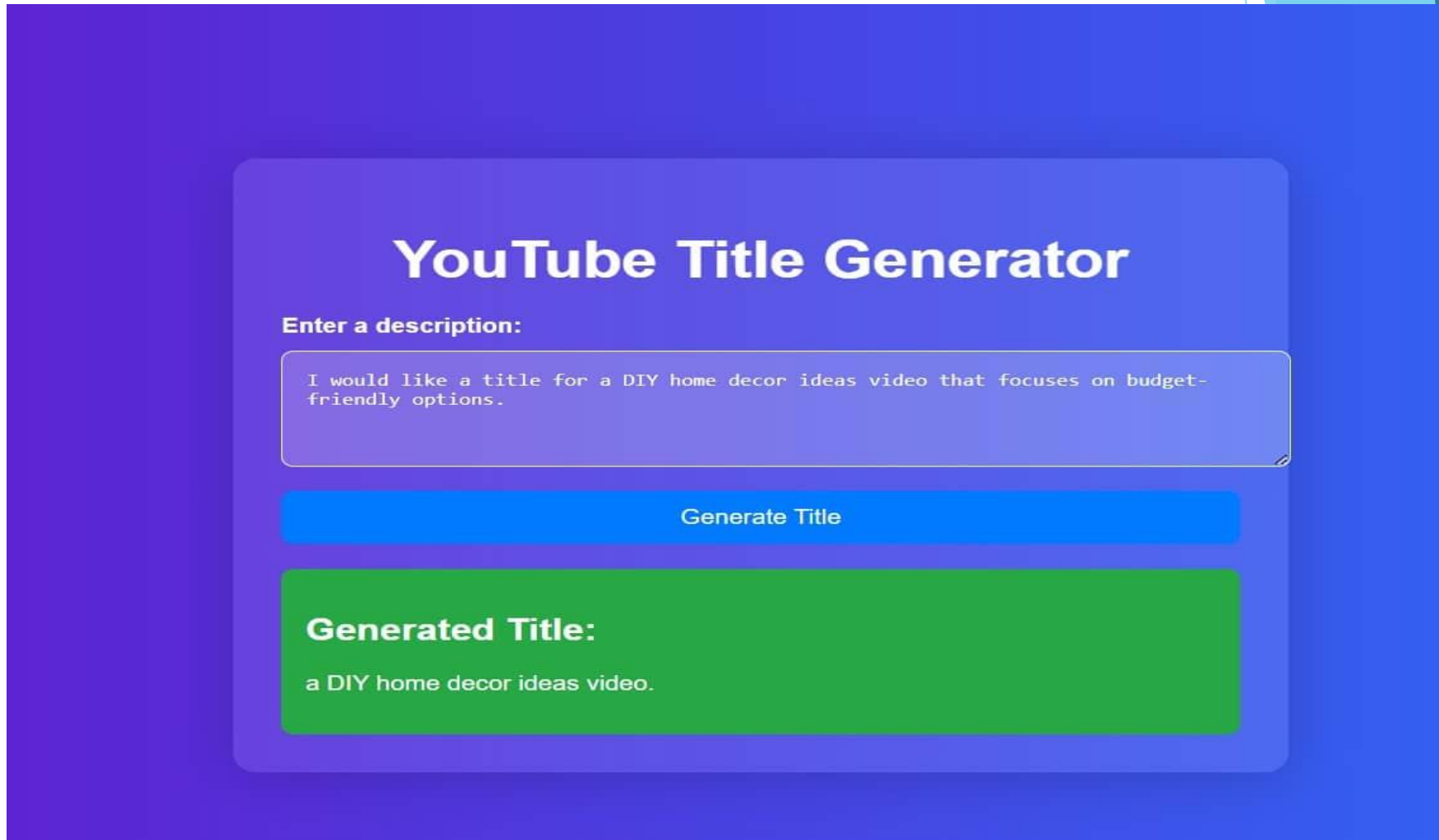
zkczDkbaE68&t=7s

Get Summary

Summary:

When people look at me they see what they want to see and that comes with a lot of expectations . I want to say you are not defined by an instagram photo by a like by a comment that does not define you . I know what it's like to have other people form opinions of you without even knowing you trying to dim your light . i'm so grateful for what i have and i am ready for what comes next in my life . i want you guys to believe in yourselves because i believe in you and you guys need to . believe in each other . i am so excited for what's going to come next for you guys thank you

Implementation

The image shows a web application interface for a YouTube title generator. It features a dark blue background with a lighter blue rounded rectangle in the center. Inside this rectangle, the title 'YouTube Title Generator' is displayed in white. Below the title, there is a label 'Enter a description:' followed by a text input field containing the text 'I would like a title for a DIY home decor ideas video that focuses on budget-friendly options.'. A blue button labeled 'Generate Title' is positioned below the input field. At the bottom, a green box contains the label 'Generated Title:' and the text 'a DIY home decor ideas video.'.

YouTube Title Generator

Enter a description:

I would like a title for a DIY home decor ideas video that focuses on budget-friendly options.

Generate Title

Generated Title:

a DIY home decor ideas video.

Conclusion

The YouTube Sentiment Analyzer is a crucial tool for content creators, providing valuable insights into viewer sentiments and enhancing their understanding of audience feedback. By offering features like title optimization and video transcript summarization, the Analyzer helps creators refine their content strategies for better engagement.

References

- [1] Rawan Fahad Alhujaili, Wael M.S. Yafooz, "Sentiment Analysis for YouTube Videos with User Comments: Review," IEEE Xplore, 2021. DOI: 10.1109/ICAIS50930.2021.9396049.
- [2] Madden, A., Ruthven, I., & McMenemy, D. (2013). A classification scheme for content analyses of YouTube video comments. *Journal of Documentation*, 69(5), 693-714.
- [3] G. Gürsun, M. Crovella, and I. Matta, "Describing and forecasting video access patterns," in *Proc. IEEE INFOCOM* , 2011, pp. 16–20.

Thank You...!!