YOUTUBE CHANNEL ANALYSIS

-Performance Overview, Insights & Recommendations

WHY NECESSARY?

1. To understand what content the audience truly enjoys.
2. To improve channel's performance with data-backed decisions.
3. To identify the best months, video types, and topics for growth.
4. Turning casual viewers into loyal subscribers by optimizing content strategy.

CHANNEL STATISTICS

This function collected details of the YouTube channel:
1. Channel Name
2. Subscriber Count
3. Total Views
4. Video Count
5. Playlist ID for uploaded videos

Function to get channel statistics

```python
[3]: def get_channel_stats(youtube, channel_id):
         request= youtube.channels().list(
             part= 'snippet, contentDetails, statistics',
             id= channel_id)
         response = request.execute()

         data= dict(Channel_name= response['items'][0]['snippet']['title'],
                    Subscriber= response['items'][0]['statistics']['subscriberCount'],
                    Views= response['items'][0]['statistics']['viewCount'],
                    Total_videos= response['items'][0]['statistics']['videoCount'],
                    playlist_id= response['items'][0]['contentDetails']['relatedPlaylists']['uploads'])

         return data
```

```python
[4]: channel_stat=get_channel_stats(youtube, channel_id)
```

```python
[5]: channel_stat
```

```python
[5]: {'Channel_name': "Pallabi's makeover and vlog",
      'Subscriber': '204',
      'Views': '78701',
      'Total_videos': '228',
      'playlist_id': 'UUAbXDrX513AWHuEpfNYDTpw'}
```

```python
[6]: channel_data= pd.DataFrame([channel_stat])
```

VIDEO DETAILS

```python
[12]: def get_video_ids(youtube, playlist_id):
          request= youtube.playlistItems().list(
              part= 'contentDetails',
              playlistId= playlist_id,
              maxResults=50)
          response= request.execute()

          video_ids= []
          for i in range(len(response['items'])):
              video_ids.append(response['items'][i]['contentDetails']['videoId'])

          nextpage_token= response.get('nextPageToken')
          more_pages= True

          while more_pages:
              if nextpage_token is None:
                  more_pages= False
              else:
                  request= youtube.playlistItems().list(
                          part= 'contentDetails',
                          playlistId= playlist_id,
                          maxResults=50,
                          pageToken= nextpage_token)
                  response= request.execute()
                  for i in range(len(response['items'])):
                      video_ids.append(response['items'][i]['contentDetails']['videoId'])
                  nextpage_token= response.get('nextPageToken')

          return video_ids

[   video_    t_video_ids(youtube, playlist_id)
```
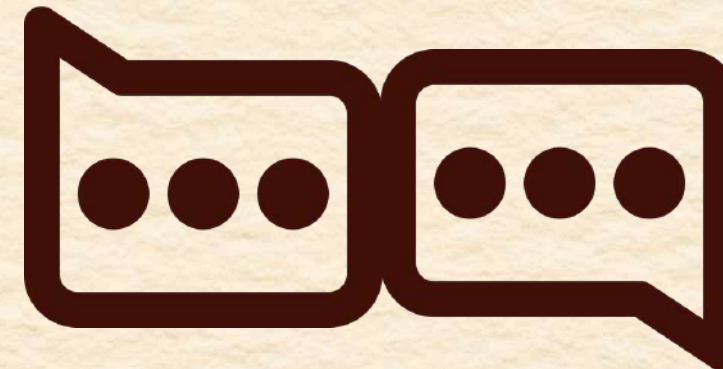
This function collected details of videos:
1. Pulled out all video IDs from the channel's upload playlist
2. Retrieved title, publish date, view count, like count, and comment count

CLEANING AND TRANSFORMING THE DATA

- Ensures correct formats for plotting and analysis
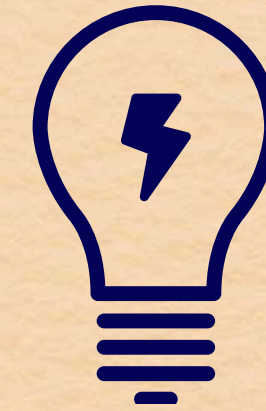- Converts date and numeric fields

1. video_data['Published_date'] = pd.to_datetime(video_data['Published_date']).dt.date
2. video_data['Views'] = pd.to_numeric(video_data['Views'])
3. video_data['Likes'] = pd.to_numeric(video_data['Likes'])
4. video_data['Comment'] = pd.to_numeric(video_data['Comment'])
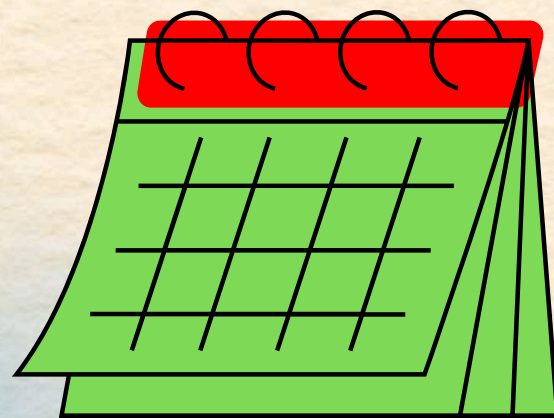
```python
def get_video_details(youtube, video_ids):
    all_video=[]
    for i in range(0, len(video_ids), 50):
        request= youtube.videos().list(
            part= "snippet, statistics",
            id= ",".join(video_ids[i:i+50]))
        response= request.execute()

        for video in response['items']:
            video_stats= dict(Title= video['snippet']['title'],
                            Published_date= video['snippet']['publishedAt'],
                            Views= video['statistics']['viewCount'],
                            Likes= video['statistics'].get('likeCount', 0),
                            Comment= video['statistics'].get('commentCount',
            all_video.append(video_stats)
    return all_video
```

[20]: `video_detail=get_video_details(youtube, video_ids)`

[21]: `video_data=pd.DataFrame(video_detail)`
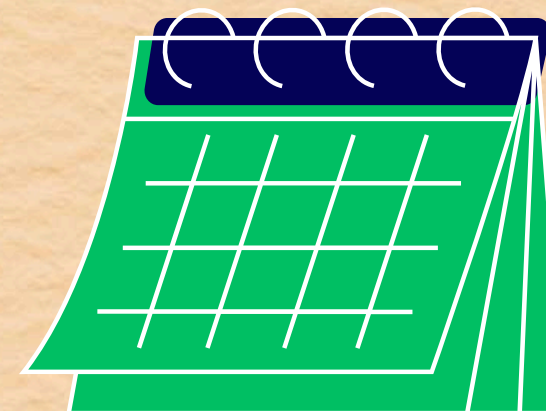
[22]: `video_data`

THE INSIGHTS

Channel Overview:
1. Total videos: 228, Subscribers: 204, Total Views: 79K
2. Active for 12 months, with consistent posting

Performance Highlights:
3. July 2022 was the best-performing month:
4. Highest viewed video: 11,277 views
5. Most liked video: 330 likes
6. August 2022 also saw high viewership but less engagement.

Uncovering Youtube Channel Trends: Client Project

Channel Name: Pallabi's makeover

Channel Language: Bilingual

Channel Category: Daily Vlogs

Channel Origin: India

VLOG

204 👥 Subscriber Count	**228** 📼 Total Videos	**79K** Total Views	**1991** 👍 Like Count
12 📅 Active Months	**4** Average Engagement Rate	**3** Average Likes Per Video	**61** Comment Count

Monthly Analysis

- Select all
- April
- August
- December
- February

Videos by Month

3, 5, 6, 7, 8, 10, 12, 13, 19, 25, 46, 74

M..., February, January, April, March, November, June, December, September, October, July, August

Monthly Views

January, February, March, April, May, June, July, August, September, October, November, December
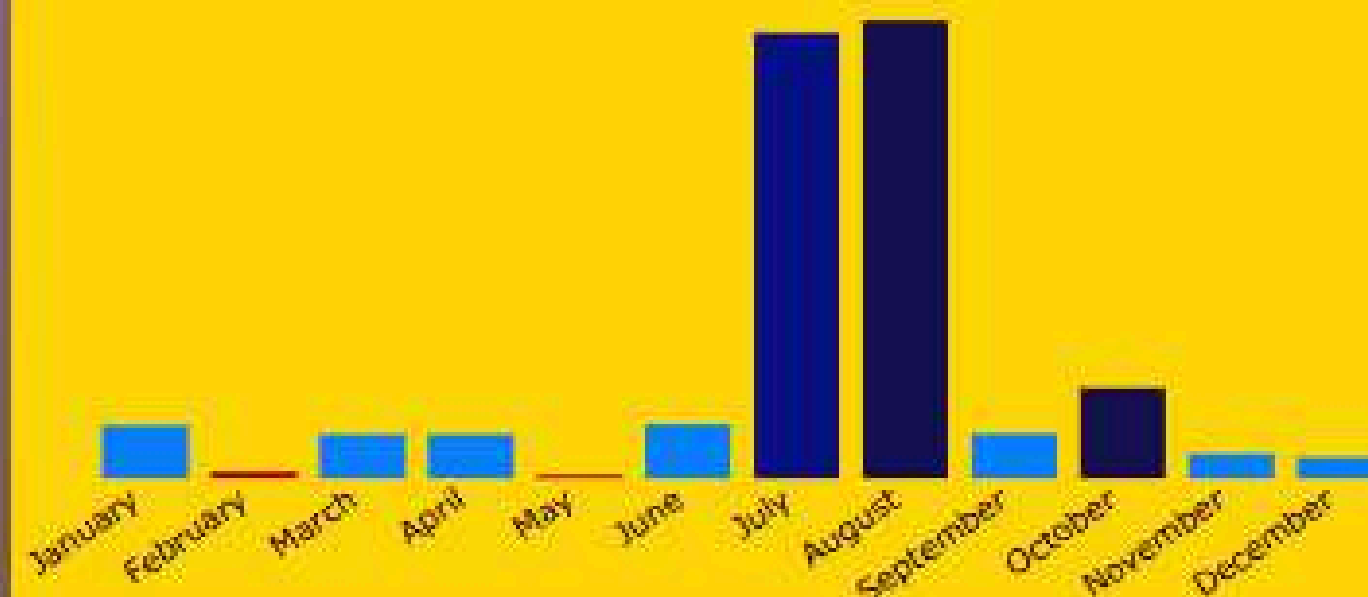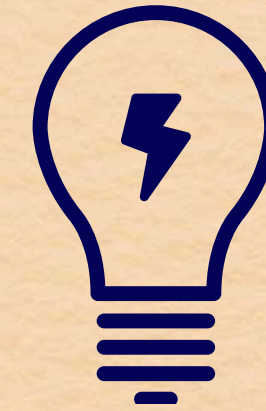
THE INSIGHTS

Engagement Stats:
- Average Likes per Video: 3, Average Engagements per Day: 4
- Highest engagement from YouTube Shorts, particularly food reviews.

Trending Video Type:
- "Worst Biryani Review" short had the highest engagement rate
- Latest dance short (April 2025): 1.5K views, 6 likes

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| Most Liked Video	Year	Month	Like Count
#shorts	2022	July	330
#shorts #youtubeshorts	2022	July	197
Amazing experiments #sciencefacts #scienceexperiment	2022	July	97
#shorts #ytshorts #ashortaday	2022	August	95
#shorts	2022	August	79
জন্মদিনের স্পেশাল লাঞ্চ মেনু😊😊🌸🌹 #shorts #food #ytshorts #ashortaday #lunch #youtubeshorts	2022	August	64
Girls during puja fast😂😂😂 #shorts #ytshorts #youtubeshorts #youtube	2022	August	59

Top Viewed Video	Year	Month	View Count
#shorts	2022	July	11277
#shorts #youtubeshorts	2022	July	7383
#shorts	2022	August	3172
Girls during puja fast😂😂😂 #shorts #ytshorts #youtubeshorts #youtube	2022	August	2665
যেই দেশে ছেলে মা বাবাকে কুপিয়ে খুন করছে সেখানে বৃদ্ধাশ্রম দরকার #shorts	2022	August	2611
Amazing experiments #sciencefacts #scienceexperiment	2022	July	2395
#shorts #ytshorts #ashortaday	2022	August	2244

| Most Engaged Video	Eng Rate	Category
My beautiful day|Food review of worst biriyani😭😭| #bengalivlog #dailyvlog	20.00	Others
vlog|Unboxing makeup #vlog @Pallabi's makeover and Blog	16.00	MakeUp
My vlog|Baba recover korche |bengali vlog #vlog	15.62	Others
Durga Puja shopping day1😊😊😍||3 days ka vlog ek sath||Main fut fut kar royi 😭😭	15.38	Others
Another day in my life| **Babu marlo**|Bristi te vije gelam|#dailyvlog	15.00	Others

Category	Total Eng Rate
Others	397.41
Shorts	377.54
MakeUp	115.27
Food	4.90

Category	Comment Count
Others	34
Shorts	15
MakeUp	10
Food	2

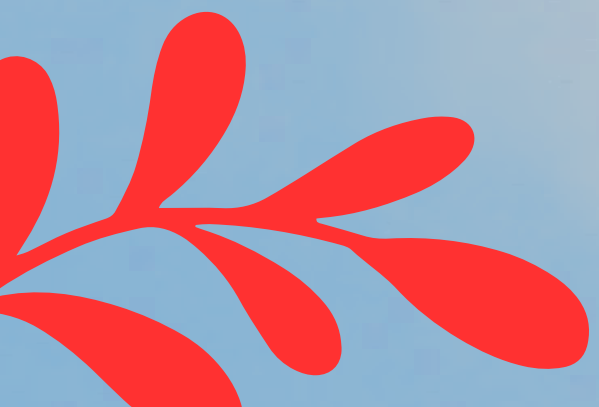| Recent Video	Year	Month
#dance	2025	April
Ai bahar dil ~ #youtubeshorts #dance	2025	April
I am a Disco Dancer #dance #youtubeshorts	2025	April
বাস্তব জীবনে যখন সিরিয়ালের মিউজিক চলে ~ #shorts #youtubeshorts #funny	2025	April
#lunch	2023	March
#sundayspeciallunch #shorts	2023	April
1st january 2023 special vlog|| New year special vlog|| year starting fun💎	2023	January
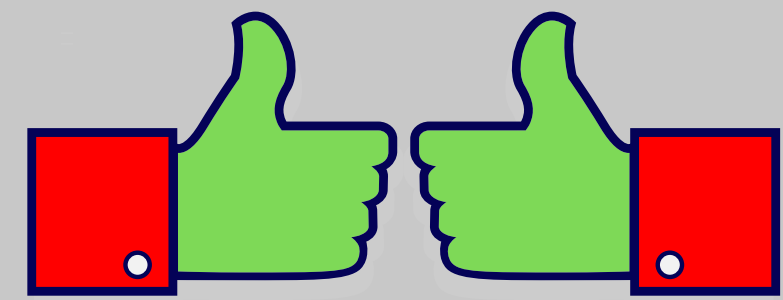
RECOMMENDATIONS
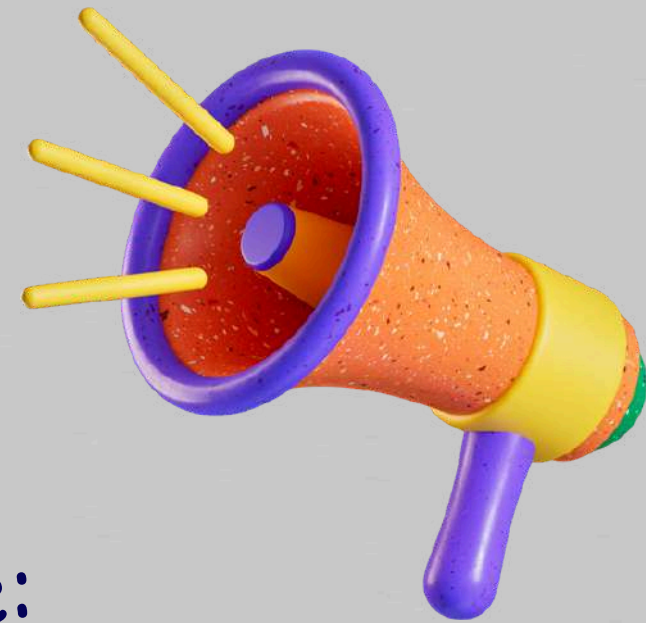
1. Focus more on YouTube Shorts, especially food-related or humorous themes.
2. Recreate or experiment around the 'Worst Biryani' food review format.
3. Leverage high-engagement periods like July and August for future uploads.
4. Optimize video titles & thumbnails with SEO-rich keywords like: "funny food review", "cheap eats vlog", "viral dance short"
5. Engage more with audience through polls, pinned comments, and call-to-actions in videos.
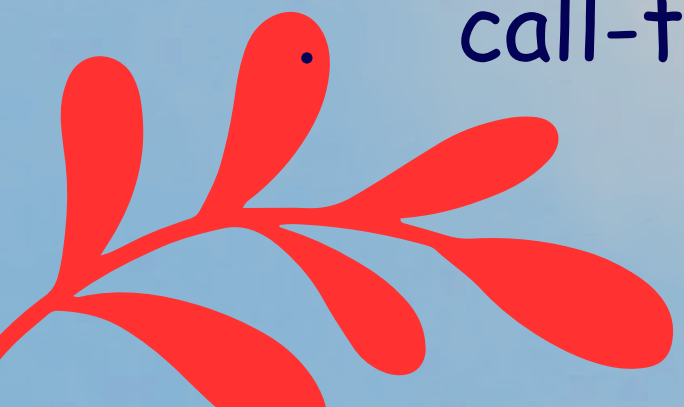
WHAT'S NEXT❓

1. Create a content calendar📅 focused on proven-performing formats (i.e., Shorts)
2. Try collaboration videos with other micro creators for cross-promotion.
3. Explore analytics 📊 weekly to track likes, views, and comments — simplify it using Power BI or Google Sheets.
4. Gradually increase long-form content to build loyal subscribers once Shorts drive more traffic.

THANK YOU