



SVKM's NMIMS

Mukesh Patel School of Technology Management and Engineering

Department of Computer Engineering

A Report on

Social Media Data Analysis

Submitted To

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ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to everyone who supported me throughout my internship journey at **YouVah**. First and foremost, I extend my sincere thanks to YouVah for providing me with the opportunity to intern with them and for trusting me with meaningful projects that allowed me to apply my skills and grow professionally. The experience has been invaluable, and I am grateful for the mentorship and learning opportunities provided by the entire YouVah team.

I am deeply thankful to **Mr. Rohit Jain**, founder of YouVah, for recognizing the potential in me and for allowing me to work with YouVah. I also thank my industry mentor, **Mr. Jainatva Jain**, for his unwavering guidance, encouragement, and support throughout the internship. His expertise and insights have been instrumental in shaping my understanding of social media analytics and digital strategy. Jainatva's mentorship has not only enhanced my technical skills but has also inspired me to strive for excellence in every task I undertake.

I would also like to extend my appreciation to my faculty mentor, **Dr. Srikanth Pulipeti**, for his continuous support and encouragement throughout the internship period. His constructive feedback and mentorship have played a significant role in my professional development and learning journey.

In conclusion, this internship at YouVah has been a transformative experience that has equipped me with valuable skills, insights, and experiences. It has reinforced my passion for data-driven decision-making and strategic planning in the digital age. I am excited about the future possibilities and look forward to applying the knowledge gained from this internship in my future career endeavors.

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I. ABSTRACT

This report provides a detailed account of my two-month internship experience as a Social Media Data Analyst Intern at YouVah. The internship allowed me to contribute to the company's growth through various tasks focused on analyzing and researching social media data.

The report begins with an introduction to YouVah outlining its mission and objectives. It then delves into the specifics of the project I worked on, highlighting the goals and the overall approach taken to achieve them. The project aimed to harness social media insights to enhance the company's online presence and engagement strategies.

Additionally, the report covers the work done during the internship, including data collection, analysis, and reporting. It describes how the findings were used to inform and improve the company's social media strategies. The implementation and design of the project are also discussed, emphasizing the practical aspects and the impact of the work.

Finally, the report explores the future implications of the project's outcomes and suggests potential areas for further research and development. It concludes with reflections on the internship experience, emphasizing the valuable skills and insights gained, and their contribution to my professional growth as a social media data analyst.

II. ABOUT THE COMPANY



YouVah stands as India's pioneering internship platform exclusively designed for teenagers. Its mission is to empower high school students across the nation by providing them with early career exposure through internship experiences tailored to their interests and aspirations. YouVah's vision is to create a one-stop solution for all teenagers looking to start or explore different unconventional careers at an early age.

YouVah values impact, quality, and accessibility in its approach to education and career development. The company aims to empower and support as many school students as possible across India, helping them shape their careers in domains they are passionate about. By providing best-in-class training in the most in-demand skills, YouVah ensures that its curriculum is designed with teenagers in mind. The accessibility of YouVah's programs is also a key focus, with curriculum and pricing planned to cater to a wide range of teenagers' needs, balancing affordability and the difficulty level of learning.

All internships offered by YouVah are co-created with leading companies, ensuring that students receive hands-on training in relevant fields. Beyond internships, YouVah fosters a vibrant community where teenagers can connect with like-minded peers who share their interests. Through this platform, students can build meaningful friendships, collaborate on projects, and create a supportive environment for growth and exploration.

III. INTRODUCTION

During my eight-week internship at YouVah, I served as a Social Media Data Analyst Intern, contributing to various tasks aimed at enhancing the company's social media strategy and engagement. My role involved web scraping, data analysis, market research, competitor analysis, and content creation, providing me with a comprehensive experience in social media analytics. Throughout the internship, I utilized my analytical skills to derive actionable insights from social media data, supporting YouVah's mission to empower teenagers through early career exposure and training.

Initially, my focus was on web scraping from different social media platforms to collect engagement data. This involved cleaning and organizing the scraped data, ensuring its readiness for detailed analysis. The preliminary analysis phase was critical in identifying key metrics and trends, forming the foundation for deeper insights and strategic recommendations.

As the internship progressed, my tasks evolved to include more advanced analyses and research activities. I conducted market research, developed content strategies, performed competitor analysis, and created story ideas for content creation. In the final weeks, I researched AI tools that could benefit the firm, understanding their technicalities and potential applications in enhancing YouVah's social media strategy.

3.1 Project Description

The primary project during my internship aimed to optimize YouVah's social media presence through data-driven strategies. In the first week, I collected engagement data from various social media platforms, cleaned and organized the data, and performed preliminary analysis to identify key metrics and trends. This initial phase was crucial in providing a solid foundation for subsequent analyses.

In the following weeks, I conducted a deeper analysis of the collected data, identifying patterns and correlations in social media engagement. I utilized visualization tools such as Matplotlib, Seaborn, and Tableau to create comprehensive visual representations of the data. These visualizations helped in uncovering deeper insights and trends, which were documented in initial reports.

Midway through the internship, I conducted market research to understand current social media trends and dynamics. This research informed the development of a content strategy aimed at leveraging YouVah's existing customer base for increased engagement. Additionally, I

performed a comprehensive competitor analysis, gathering data on competitor engagement metrics and content types, and identifying their strengths, weaknesses, opportunities, and threats (SWOT analysis).

In the latter weeks, I worked on a system to gather trending memes and analyzed their sentimental reach to ensure the most relevant content was identified. I also developed story ideas for content creation, backed by my analysis of successful content from various Instagram platforms. In the final week, I researched AI tools that could enhance YouVah's content strategy and engagement with its audience, understanding their technicalities and potential applications.

3.2 Technical Knowledge Gain

Throughout the internship, I gained substantial technical knowledge and practical experience in web scraping, data cleaning, and organizing large datasets. I developed proficiency in performing trend and sentiment analysis and visualizing data using tools such as Matplotlib, Seaborn, and Tableau. These skills were essential in transforming raw data into actionable insights.

Additionally, I acquired expertise in conducting thorough market research, understanding social media trends and dynamics, and performing detailed competitor analysis, including SWOT analysis. The integration of AI tools in the final phase of my internship expanded my knowledge of how these technologies can be utilized to enhance social media strategies, contributing to both my professional growth and the company's strategic goals.

IV. PROJECT OUTLINE

4.1 About the Project

The primary project during my internship at YouVah aimed to optimize the company's social media presence through data-driven strategies. This involved collecting, analyzing, and leveraging social media data to enhance engagement and develop informed content strategies. The project was designed to provide actionable insights that would support YouVah's mission of empowering teenagers through early career exposure and training.

4.2 Work Done

Week 1

- Web scraping from various social media platforms to collect engagement data.
- Cleaning and organizing the scraped data.
- Performing initial data analysis to identify key metrics and trends.

Week 2

- Further analysis of the collected data to gain deeper insights.
- Identifying patterns and correlations in social media engagement.
- Visualizing the analyzed data using tools like Matplotlib, Seaborn, and Tableau.
- Preparing an initial report on findings from the data analysis.

Week 3

- Conducting market research to understand current social media trends.
- Analyzing the dynamics of the available data to inform content strategy.
- Developing a strategy to leverage the existing customer base for increased engagement.
- Creating a preliminary content strategy based on research and data analysis.

Week 4

- Gathering data on competitor engagement metrics and content types.
- Conducting a comprehensive competitor analysis to understand the strategies of top competitors.
- Identifying strengths, weaknesses, opportunities, and threats (SWOT analysis) from competitors' social media strategies.

Week 5

- Finalizing the competitor analysis report.
- Preparing a detailed strategy document incorporating insights from the competitive analysis.
- Developing actionable recommendations for improving YouVah's social media engagement.
- Presenting the proposed strategy to the team for feedback and further refinement.

Week 6

- Researching a system to gather trending memes for a project.
- Scraping Internshala website for extracting useful data.

Week 7

- Analyzing various Instagram platforms to identify successful content.
- Developing story ideas for content creation based on the analysis.
- Creating content strategies that leveraged highly praised content from other platforms.

Week 8

- Researching AI tools that could be beneficial for YouVah.
- Understanding the technicalities and potential applications of these AI tools in analyzing video content.
- Integrating the AI tools to enhance YouVah's content strategy and engagement.

4.3 Implementation and Design

The implementation of the project involved a systematic approach to data collection and analysis. Initially, web scraping techniques were employed to gather engagement data from various social media platforms. The data was then cleaned and organized to ensure its readiness for analysis. Analytical frameworks were used to perform trend and sentiment analysis, and visualization tools like Matplotlib, Seaborn, and Tableau were employed to create comprehensive visual representations of the data.

Market research and competitor analysis were conducted to inform content strategy development. The insights gained from these analyses were used to develop detailed strategy

documents and actionable recommendations. In the final phase, AI tools were researched and integrated to analyze video content, enhancing YouVah's overall content strategy.

Code snippets:

```
likes = likes_element.text

# Execute JavaScript to extract caption
caption = driver.execute_script("return document.querySelector('meta[property=\"og:description\"]').getAttribute('content')")

# Extract hashtags from the caption using regular expressions
hashtags = re.findall(r'#\w+', caption)

print(f"Likes: {likes}")
print("Hashtags:", hashtags)
finally:
    # Close the WebDriver
    driver.quit()
```

Likes: 3,328 likes
Hashtags: ['#YouVahSummer']

```
In [6]: from selenium import webdriver
from selenium.webdriver.common.by import By
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
from selenium.common.exceptions import TimeoutException, NoSuchElementException

# Initialize WebDriver
driver = webdriver.Chrome()

try:
    # Open Instagram post URL
    post_url = 'https://www.instagram.com/p/CuZRWE0gfdG/'
    driver.get(post_url)
```

```
# Specify Chrome WebDriver options
chrome_options = webdriver.ChromeOptions()
chrome_options.add_argument("--disable-blink-features=AutomationControlled")

# Initialize Chrome WebDriver with ChromeDriverManager
driver = webdriver.Chrome(service=Service(ChromeDriverManager().install()), options=chrome_options)

try:
    # Open Instagram post URL
    post_url = 'https://www.instagram.com/p/C55yPrbRxg8/'
    driver.get(post_url)

    # Wait for the Likes element to be visible
    likes_element = WebDriverWait(driver, 10).until(
        EC.visibility_of_element_located((By.XPATH, "//span[contains(text(), ' likes')]"))
    )

    # Scrape Likes
    likes = likes_element.text

    # Check if views count exists (for videos)
    try:
        views_element = driver.find_element(By.XPATH, "//span[@class='vcOH2']")
        views = views_element.text
    except NoSuchElementException:
        views = "N/A"

    # Execute JavaScript to extract caption
    caption = driver.execute_script("return document.querySelector('meta[property=\"og:description\"]').getAttribute('content')")

    # Extract hashtags from the caption using regular expressions
    hashtags = re.findall(r'#\w+', caption)

    # Wait for the timestamp to be visible
    try:
```

```
In [66]: from selenium import webdriver
from selenium.webdriver.common.by import By
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
from selenium.common.exceptions import TimeoutException, NoSuchElementException

# Initialize WebDriver
driver = webdriver.Chrome()

try:
    # Open Instagram post URL
    post_url = 'https://www.instagram.com/p/CeER8pvBLYg/'
    driver.get(post_url)

    # Wait for the timestamp to be visible
    try:
        datetime_element = WebDriverWait(driver, 20).until(
            EC.presence_of_element_located((By.XPATH, "//time"))
        )
        datetime = datetime_element.get_attribute('datetime')
        print("Date and Time:", datetime)
    except TimeoutException:
        print("Timeout while waiting for the timestamp to load.")
    except NoSuchElementException:
        print("Timestamp not found.")

finally:
    # Close the WebDriver
    driver.quit()
```

Date and Time: 2022-05-27T15:56:29.000Z

```
In [2]: import pandas as pd
```

```
In [3]: df = pd.read_excel('manual_data.xlsx')
```

```
In [4]: def convert_to_int(value):
    if isinstance(value, str):
        value = value.strip() # Remove any leading/trailing whitespace
        if 'k' in value:
            return int(float(value.replace('k', '')) * 1000)
        elif 'm' in value:
            return int(float(value.replace('m', '')) * 1000000)
        else:
            try:
                return int(value)
            except ValueError:
                return 0 # or handle it another way if needed
    elif isinstance(value, (int, float)):
        return int(value)
    else:
        return 0
```

```
In [5]: df['likes'] = df['likes'].fillna(0)
df['views'] = df['views'].fillna(0)
```

```
In [6]: df['likes'] = df['likes'].apply(convert_to_int)
df['views'] = df['views'].apply(convert_to_int)
```

```
In [7]: print(df.head())
```

	trend	informative	views	likes	hashtags
0	no	yes	4013	116	#YouVah #ResumeRefresh #UnlockYourSkills
1	yes	no	7777	168	#onelove
2	yes	yes	1500000	3254	#YouVahSummer #TeenInternships
3	yes	no	9353	166	#YouVahSuccess #PaidInternships
4	no	yes	703000	1823	#YouVahSuccess #InternshipJourney

```
In [8]: df.to_excel('cleaned_1.xlsx', index=False)
```

```
In [16]: print("\nBefore mapping:")
print(df[['trend', 'informative', 'trend_informative']].head())
```

```
Before mapping:
   trend informative trend_informative
0    0.0          1          0.0_1
1    1.0          0          1.0_0
2    1.0          1          1.0_1
3    1.0          0          1.0_0
4    0.0          1          0.0_1
```

```
In [17]: mapping = {
    '1.0_1': '11',
    '1.0_0': '10',
    '0.0_1': '01',
    '0.0_0': '00'
}
```

```
In [18]: df['trend_informative'] = df['trend_informative'].map(mapping)
```

```
In [19]: print("\nAfter mapping:")
print(df[['trend', 'informative', 'trend_informative']].head())
```

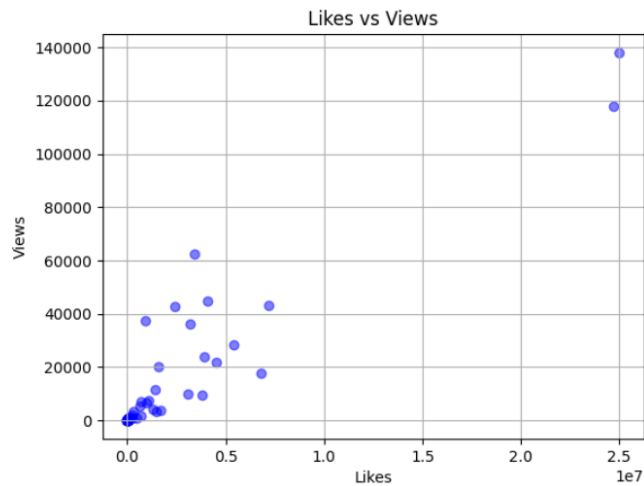
```
After mapping:
   trend informative trend_informative
0    0.0          1             01
1    1.0          0             10
2    1.0          1             11
3    1.0          0             10
4    0.0          1             01
```

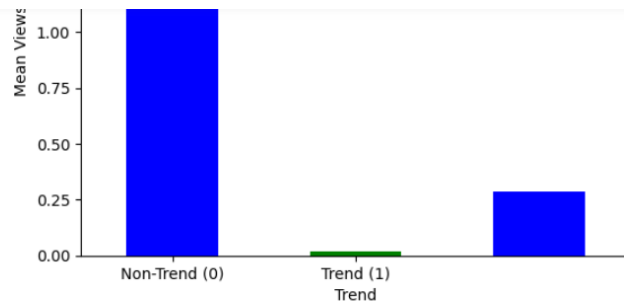
```
In [20]: df.to_excel('cleaned_3.xlsx', index=False)
```

```
In [24]: print(df.head())
```

```
In [4]: likes = df['likes']
views = df['views']
```

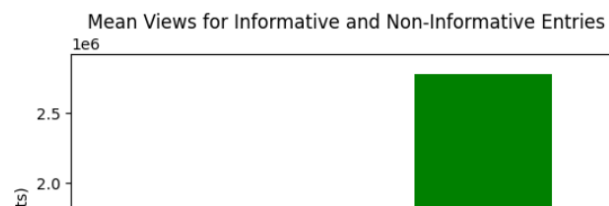
```
In [5]: plt.scatter(views, likes, color='blue', alpha=0.5) # 'alpha' for transparency
plt.xlabel('Likes')
plt.ylabel('Views')
plt.title('Likes vs Views')
plt.grid(True)
plt.show()
```





```
In [8]: views_by_informative = df.groupby('informative')['views'].mean()
```

```
In [9]: views_by_informative.plot(kind='bar', color=['blue', 'green'])
plt.xlabel('Informative')
plt.ylabel('Mean Views (units)')
plt.title('Mean Views for Informative and Non-Informative Entries')
plt.xticks([0, 1], ['Non-Informative (0)', 'Informative (1)'], rotation=0)
plt.show()
```



```
In [15]: print("\nAfter mapping:")
print(df[['trend', 'informative', 'trend_informative']].head())
```

```
After mapping:
  trend informative trend_informative
0    no         yes                01
1    yes         no                10
2    yes         yes                11
3    yes         no                10
4    no         yes                01
```

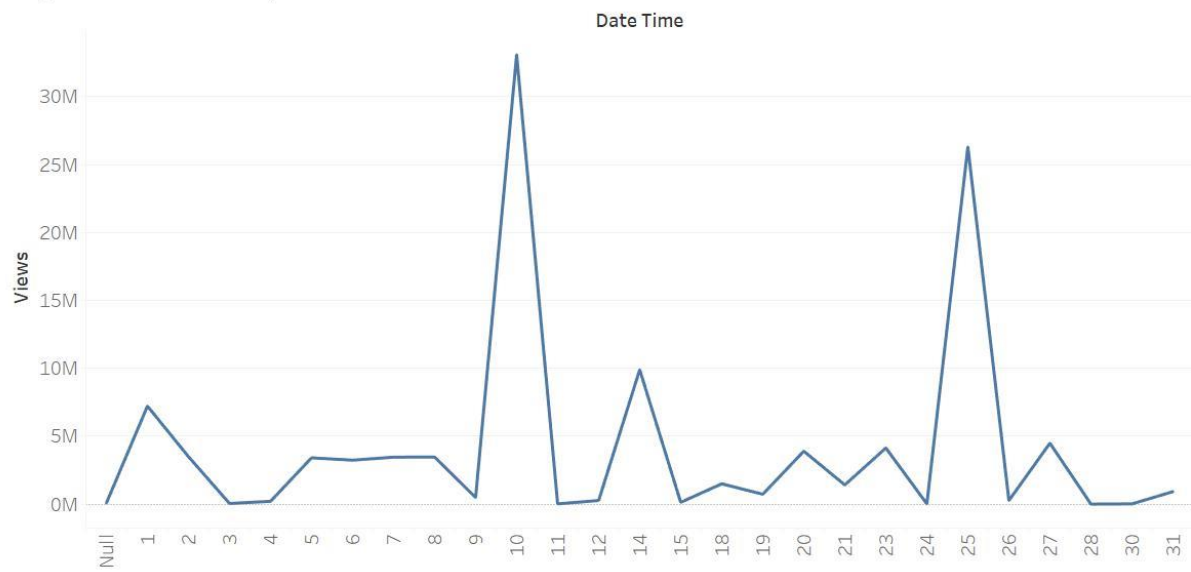
```
In [16]: views_by_combination = df.groupby('trend_informative')['views'].mean().sort_values(ascending=False)
```

```
In [17]: print("\nMean views by trend_informative combination:")
print(views_by_combination)
```

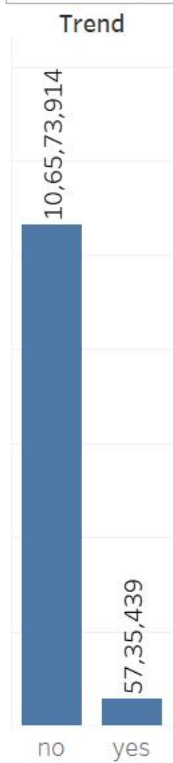
```
Mean views by trend_informative combination:
trend_informative
01    2.853740e+06
11    2.800000e+06
00    4.035533e+04
10    7.524444e+03
Name: views, dtype: float64
```

```
In [18]: if views_by_combination.empty:
print("No data available for the given combinations.")
else:
# Plotting a bar plot to compare mean views for each combination of 'trend' and 'informative'
views_by_combination.plot(kind='bar', color='blue', figsize=(10, 6))
plt.xlabel('Trend and Informative Combination')
plt.ylabel('Mean Views')
plt.title('Mean Views for Each Trend and Informative Combination')
plt.xticks(rotation=0) # Keeps the labels straight
plt.show()
```

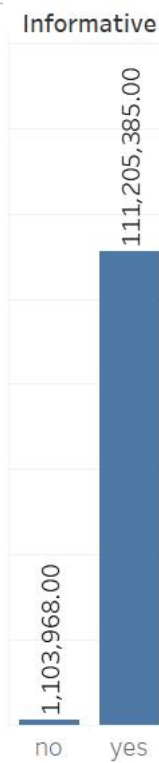
Day of the month v/s views

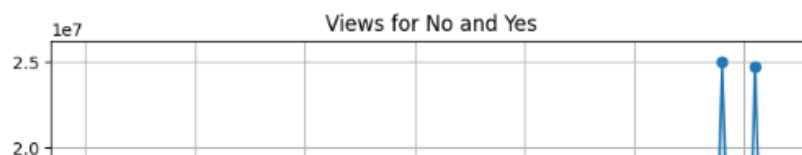
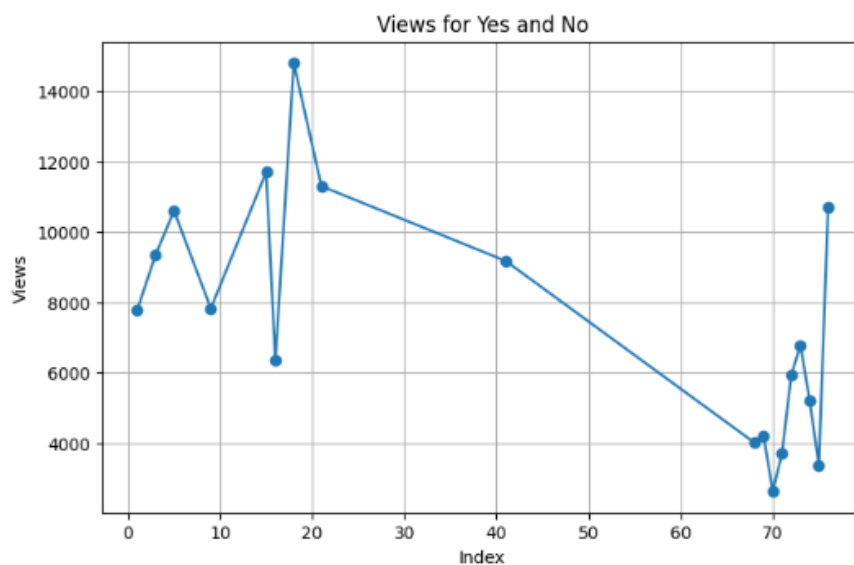
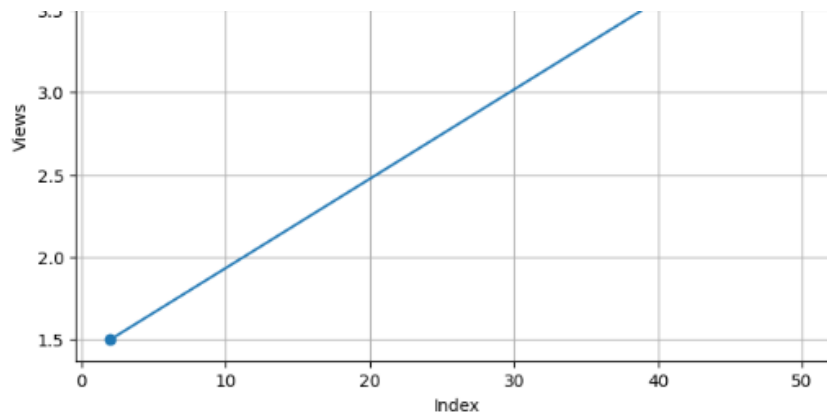


Trend v/s Views



Informative v/s Views





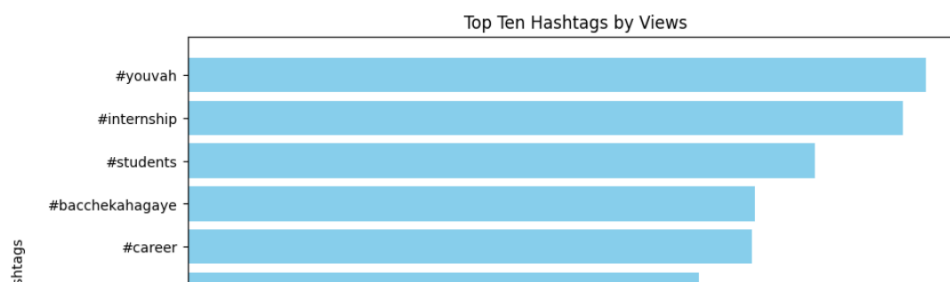
```
In [24]: top_hashtag = hashtag_views.sort_values(by='views', ascending=False).iloc[0]
```

```
In [25]: print("The best-performing hashtag is:", top_hashtag['hashtag'])
print("Total views with this hashtag:", top_hashtag['views'])
```

The best-performing hashtag is: #youvah
Total views with this hashtag: 94284607

```
In [26]: top_hashtags = hashtag_views.sort_values(by='views', ascending=False).head(10)
```

```
In [27]: plt.figure(figsize=(10, 6))
plt.barh(top_hashtags['hashtag'], top_hashtags['views'], color='skyblue')
plt.xlabel('Total Views')
plt.ylabel('Hashtags')
plt.title('Top Ten Hashtags by Views')
plt.gca().invert_yaxis() # Invert y-axis to have the highest views on top
plt.show()
```



```

In [32]: total_likes = df['likes'].sum()
         total_views = df['views'].sum()

In [33]: engagement_rate = (total_likes / total_views) * 100

In [34]: print(f"Engagement Rate based on views and likes: {engagement_rate:.2f}%")
         Engagement Rate based on views and likes: 0.65%

In [35]: df['date_time'] = pd.to_datetime(df['date and time'])

In [37]: df['hour'] = df['date_time'].dt.hour
         df['day_of_week'] = df['date_time'].dt.dayofweek # Monday=0, Sunday=6

In [38]: views_by_hour = df.groupby('hour')['views'].mean()

In [39]: views_by_day = df.groupby('day_of_week')['views'].mean()

In [43]: plt.figure(figsize=(14, 7))
         plt.subplot(1, 2, 1)
         views_by_hour.plot(kind='bar', color='skyblue')
         plt.title('Average Views by Hour of the Day')
         plt.xlabel('Hour of the Day')
         plt.ylabel('Average Views')
         plt.xticks(rotation=0)

```

```

In [9]: import instaloader

         # Create an instance of Instaloader
         loader = instaloader.Instaloader()

         # Load a profile by username
         profile = instaloader.Profile.from_username(loader.context, "fam.india")

         # Print basic profile info
         print("Username:", profile.username)
         print("Full Name:", profile.full_name)
         print("Bio:", profile.biography)
         print("Profile Pic URL:", profile.profile_pic_url)
         print("External URL:", profile.external_url)
         print("Number of Posts:", profile.mediacount)
         print("Number of Followers:", profile.followers)
         print("Number of Following:", profile.followees)
         print("Is Verified:", profile.is_verified)

Username: fam.india
Full Name: FamApp : UPI & Card
Bio: FamApp by Trio offers UPI & Card payments designed exclusively for the 21st century generation.
Profile Pic URL: https://scontent-bom2-2.cdninstagram.com/v/t51.2885-19/135026596_842465889939515_5245151244870603757_n.jpg?stp=dst-jpg_s320x320&nc_ht=scontent-bom2-2.cdninstagram.com&nc_cat=1&nc_ohc=HqH38v4dmVIQ7kNvgG9t4Lr&edm=AOQ1c0wBAAAA&ccb=7-5&oh=00_AYQ6oml6uqDZ00Gb-QB7MB9WeS043UQwDwiYhZwIEIP3g&oe=66524110&nc_sid=8b3546
External URL: https://famapp.in/
Number of Posts: 884
Number of Followers: 826778
Number of Following: 0
Is Verified: True

```



```

# Load the post by its URL
post_url = "https://www.instagram.com/p/C683FOGyPXu/"
try:
    post = instaloader.Post.from_shortcode(loader.context, post_url.split("/")[-2])
except instaloader.exceptions.InstaloaderException as e:
    print("Error:", e)
else:
    # Extract views
    views = post.mediacount
    # Extract likes
    likes = post.likes
    # Extract comments
    comments = post.comments

    # Extract caption
    caption = post.caption

    # Print the extracted details
    print("Views:", views)
    print("Likes:", likes)
    print("Comments:", comments)
    print("Caption:", caption)

```

Views: 1
 Likes: 288873
 Comments: 1002
 Caption: you've got this 🍷

```

In [25]: import requests
import json

# URL of the reel post
reel_url = "https://www.instagram.com/p/C683FOGyPXu/"

# Make a GET request to the post URL
try:

```

```

except instaloader.exceptions.InstaloaderException as e:
    print("Error loading profile:", e)
else:
    # Iterate over all posts in the profile
    for post in profile.get_posts():
        # Check if the post is a reel (video)
        if post.is_video:
            try:
                # Extract details for the reel
                views = post.video_view_count
                likes = post.likes
                comments = post.comments
                caption = post.caption

                # Print the extracted details
                print("URL:", f"https://www.instagram.com/p/{post.shortcode}/")
                print("Views:", views)
                print("Likes:", likes)
                print("Comments:", comments)
                print("Caption:", caption)
                print("-" * 40)

                # Wait a bit to avoid hitting rate limits
                time.sleep(2)
            except instaloader.exceptions.InstaloaderException as e:
                print("Error loading post:", e)

```

Caption: that's not your lunch anymore, that's OUR lunch 🍷

 URL: https://www.instagram.com/p/C6bfnRBNxzI/
 Views: 79116
 Likes: 14793
 Comments: 117
 Caption: Friendly reminder 🍷

URL: https://www.instagram.com/p/C6W07INSISM/
 Views: 99992

```
In [1]: import instaloader
import time

# Create an instance of Instaloader
loader = instaloader.Instaloader()

# Define the Instagram profile you want to scrape
profile_name = "fam.india"

# Load the profile
try:
    profile = instaloader.Profile.from_username(loader.context, profile_name)
except instaloader.exceptions.InstaloaderException as e:
    print("Error loading profile:", e)
else:
    # Iterate over all posts in the profile
    for post in profile.get_posts():
        # Check if the post is a reel (video)
        if post.is_video:
            try:
                # Extract datetime for the reel
                post_datetime = post.date_utc
                print(f"Reel datetime: {post_datetime}")

                # Break the loop after finding the first reel
                break
            except instaloader.exceptions.InstaloaderException as e:
                print("Error loading post:", e)

# Wait a bit before finishing to avoid rate limits
time.sleep(2)
```

Reel datetime: 2024-05-14 13:42:50

```
    ))

    # Wait a bit to avoid hitting rate limits
    time.sleep(2)
except instaloader.exceptions.InstaloaderException as e:
    print("Error loading post:", e)

# Introduce a delay to allow time for data collection
time.sleep(10)

# Create a DataFrame from the collected data
df = pd.DataFrame(data)

# Check if the DataFrame is empty
if df.empty:
    print("No reels found for the specified profile.")
else:
    # Print the DataFrame to verify the output
    print(df)

# Now, you can save the data from the DataFrame to an Excel file when desired.
```

	Datetime	Reel Link
0	2024-05-14 13:42:50	https://www.instagram.com/p/C683F0GyPXu/
1	2024-05-08 14:53:45	https://www.instagram.com/p/C6tgxR3Sr3x/
2	2024-05-06 13:50:09	https://www.instagram.com/p/C6oRfdut-j7/
3	2024-05-04 13:48:25	https://www.instagram.com/p/C6jH0WqyDKY/
4	2024-05-03 13:46:04	https://www.instagram.com/p/C6gitm-teJE/
...
278	2020-07-19 13:16:44	https://www.instagram.com/p/CC0zPQihcDF/
279	2020-06-21 09:04:30	https://www.instagram.com/p/CBs06hTh3Ve/
280	2020-02-19 11:27:57	https://www.instagram.com/p/B8vytn8hwM-/
281	2019-11-06 13:30:33	https://www.instagram.com/p/B4hpTyHBtyS/
282	2019-10-16 12:17:48	https://www.instagram.com/p/B3rcTVvh4kj/

```
In [17]: df['hashtags'] = df['Caption'].apply(lambda x: extract_hashtags(x))
```

```
In [18]: df['hashtags'] = df['hashtags'].apply(lambda x: ' '.join(x))
```

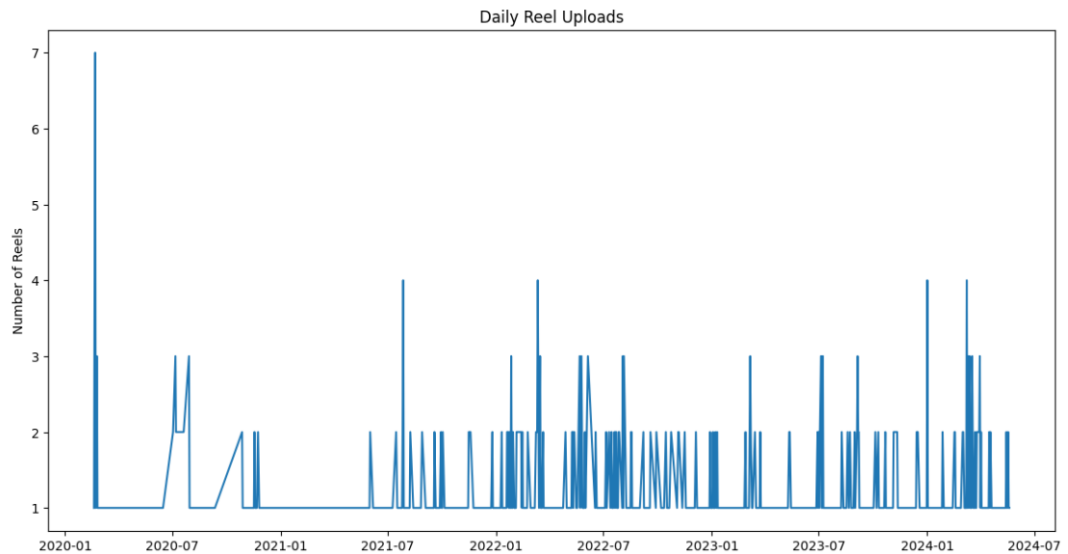
```
In [19]: df.to_excel('highschoolmoms_final.xlsx', index=False)
```

```
In [20]: print(df)
```

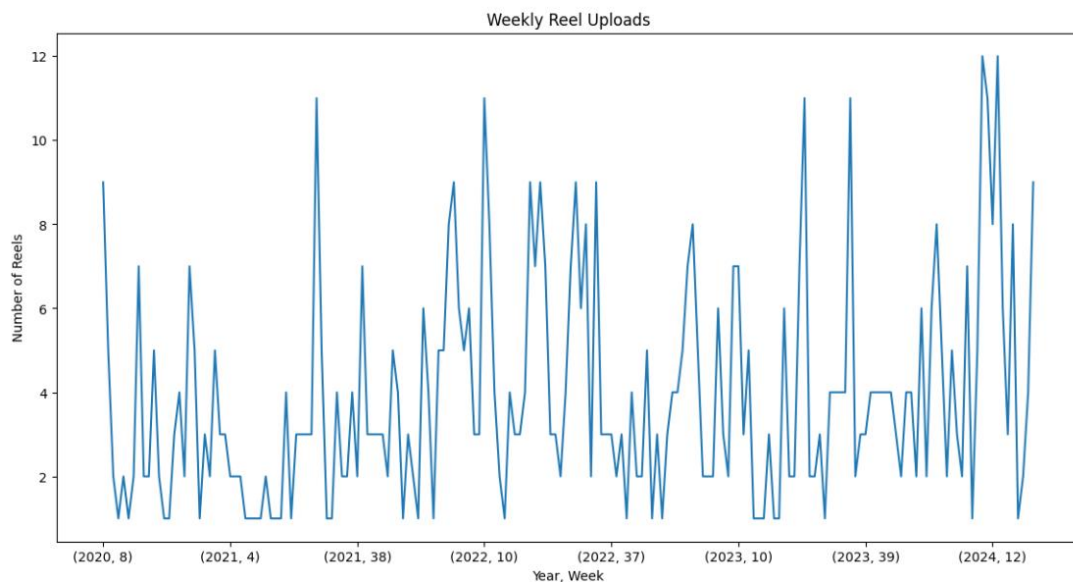
	URL	Views	Likes	Comments	\
0	https://www.instagram.com/p/C6v0yJgSgGH/	183566	6307	51	
1	https://www.instagram.com/p/C68YweMo_qZ/	28272	1421	4	
2	https://www.instagram.com/p/C66XY0BoF0Z/	25440	1367	19	
3	https://www.instagram.com/p/C7JfCY1y43E/	11579	801	6	
4	https://www.instagram.com/p/C7HJQtm5P-O/	27059	1394	19	
...
712	https://www.instagram.com/p/B81jz5nnnR/	1689	40	0	
713	https://www.instagram.com/p/B81iYT0nNDI/	380	18	0	
714	https://www.instagram.com/p/B81eRzBH2Mu/	1742	33	0	
715	https://www.instagram.com/p/B807cp0nuPc/	5981	49	0	
716	https://www.instagram.com/p/B8wXIGSnILb/	245	11	0	

	Datetime	Caption	\
0	2024-05-09 12:16:24	#neet ug results are coming out on june 14 but...	
1	2024-05-14 09:26:33	Scored less 🙄 marks in Class 12 Board Exams in...	
2	2024-05-13 14:35:23	So what are your next steps after Class X Boar...	
3	2024-05-19 11:57:26	Watch this video if you are a commerce student...	
4	2024-05-18 13:37:44	Most important courses for students of 10+2 PC...	
...
712	2020-02-21 17:14:26	#hsm2020gurgaon Join High School Moms Group to...	
713	2020-02-21 17:00:27	Why You Must 📢📢📢 attend #hsm2020gurgaon @crown...	
714	2020-02-21 16:26:03	High School Dad ' Ashwin Mittal ' attended HSM...	
715	2020-02-21 11:23:31	What Moms say about HSM Career Conclave . Wann...	
716	2020-02-19 16:50:55	High School Moms 3rd Annual Career Conclave Ap...	

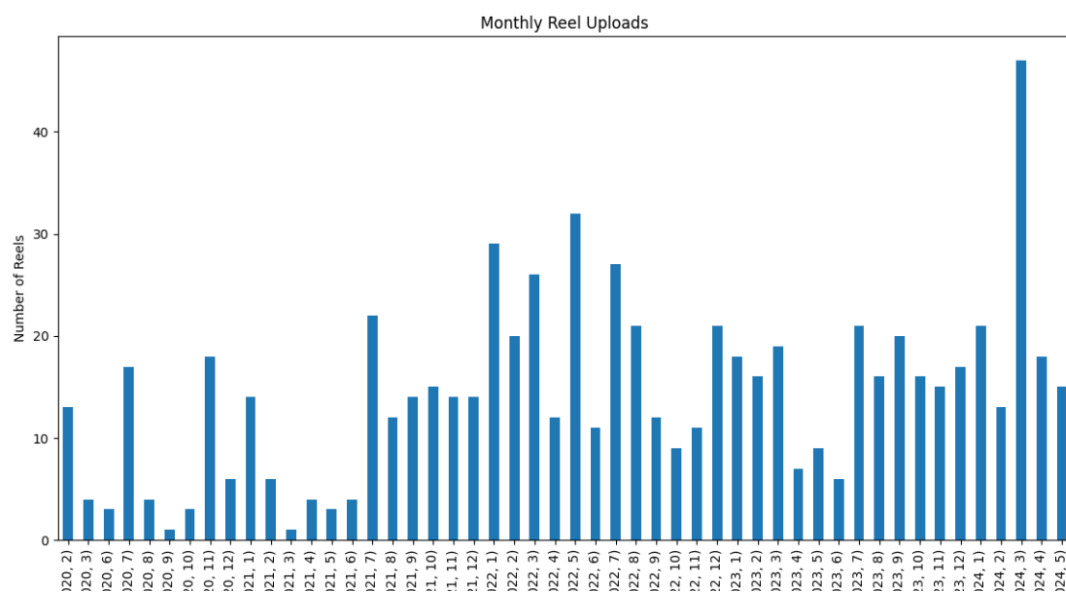
```
In [10]: # Daily uploads
plt.figure(figsize=(14, 7))
daily_counts.plot(kind='line')
plt.title('Daily Reel Uploads')
plt.xlabel('Date')
plt.ylabel('Number of Reels')
plt.show()
```



```
In [11]: # Weekly uploads
plt.figure(figsize=(14, 7))
weekly_counts.plot(kind='line')
plt.title('Weekly Reel Uploads')
plt.xlabel('Year, Week')
plt.ylabel('Number of Reels')
plt.show()
```

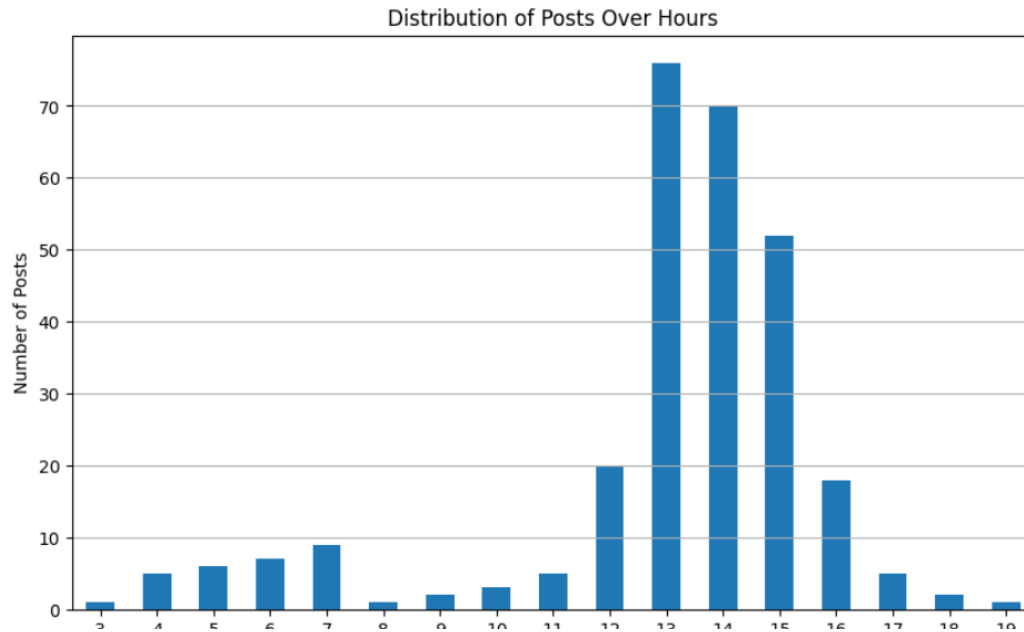


```
In [12]: # Monthly uploads
plt.figure(figsize=(14, 7))
monthly_counts.plot(kind='bar')
plt.title('Monthly Reel Uploads')
plt.xlabel('Year, Month')
plt.ylabel('Number of Reels')
plt.show()
```



```
plt.grid(axis='y')
plt.show()

# Step 6: Find the hour with the highest number of posts
most_relevant_hour = hourly_counts.idxmax()
print("Most relevant hour to post:", most_relevant_hour)
```



	A	B	C	D	E	F	G	H	I	J	K	L
1	trend	informative	views	likes	date and time	hashtags						
2	0	1	4013	116	2024-05-07T15:07:47	#YouVah #ResumeRefresh #UnlockYourSkills						
3	1	0	7777	168	2024-04-24T11:05:55	#onelove						
4	1	1	1500000	3254	2024-04-18T12:30:31	#YouVahSummer #TeenInternships						
5	1	0	9353	166	2024-04-15T12:22:41	#YouVahSuccess #PaidInternships						
6	0	1	703000	1823	2024-04-08T12:23:17	#YouVahSuccess #InternshipJourney						
7	1	0	10600	209	2024-04-05T12:35:49	#BirthdayVibes #ClassroomFun						
8	0	1	9568	199	2024-04-03T12:42:43	#YouVah #CareerCounselling #SapnoKaSafar						
9	0	1	3800000	9581	2024-03-27T12:30:55	#YouVahSummerInternship #ProductiveHolidays						
10	0	1	5632	96	2024-03-23T12:30:13	#YouVahSummerInternship #IntensePassion						
11	1	0	7828	219	2024-03-21T12:30:13	#reels #trending #passingphonechallenge						
12	0	1	6838	135	2024-03-19T12:30:42	#YouVahSummerInternship #GraphicDesign #VideoEditing						
13	0	1	6977	149	2024-03-15T12:26:26	#YouVahSummerOpportunities #WebDevSkills #GuaranteedSuccess						
14	0	1	267000	717	2024-03-12T12:30:23	#YouVahGraphicDesign #DesignYourFuture #PaidInternships						
15	0	1	492000	979	2024-03-09T12:30:14	#YouVahProCourses #DigitalMarketing #PaidInternships						
16	0	1	19500	153	2024-03-06T12:30:42	#Youvah #LeadTheConversation						
17	1	0	11700	409	2024-03-03T12:30:24	#FarewellPrep #YouVahJourney						
18	1	0	6353	194	2024-03-03T07:13:23	#FarewellPrep #YouvahJourney #trending #ambani						
19	0	0	7871	186	2024-02-27T11:55:44	#YouVahAdventures #BangaloreBound						
20	1	0	14800	345	2024-02-23T14:07:46	#exams #teenage #board						
21	0	1	1400000	11500	2024-02-21T13:31:59	#TeenpreneurSuccess #YouVahJourney						
22	0	1	697000	7178	2024-02-19T12:43:42	#YouVahAdventures #EntrepreneurshipUnleashed #YouVahxMastersUnion						
23	1	0	11300	292	2024-02-11T13:48:05	#teenagers #teenlife #school #exam #exams						
24	0	0	11400	213	2024-02-11T08:04:46	#internship #opportunity #teenlife #teenagers						
25	0	0	7193	204	2024-02-08T05:57:44	#MannKiBhadaas #PreBoardsBlues						
26		1	17000	220	2024-02-03T16:56:50	#TeenTrailblazers #YouVahMastersUnion #mastersunion #StartupAdventure						
27	0	1	8188	174	2024-01-31T12:30:31	#YouVahMagic #InternshipExcitement #SummerUnleashed						
28	0	0	4866	92	2024-01-30T12:03:39	#TeenDreams #YouVahStories #InspiringTeens						

1	trend	informative	views	likes	date and time	hashtags	trend_informative	date_time	hour	day_of_week	date
2	no	yes	4013	116	2024-05-07T15:07:47	#YouVah #ResumeRef	01	2024-05-07 15:07:47	15	1	2024-05-07
3	yes	no	7777	168	2024-04-24T11:05:55	#onelove	10	2024-04-24 11:05:55	11	2	2024-04-24
4	yes	yes	1500000	3254	2024-04-18T12:30:31	#YouVahSummer #Tee	11	2024-04-18 12:30:31	12	3	2024-04-18
5	yes	no	9353	166	2024-04-15T12:22:41	#YouVahSuccess #Paid	10	2024-04-15 12:22:41	12	0	2024-04-15
6	no	yes	703000	1823	2024-04-08T12:23:17	#YouVahSuccess #Inte	01	2024-04-08 12:23:17	12	0	2024-04-08
7	yes	no	10600	209	2024-04-05T12:35:49	#BirthdayVibes #Class	10	2024-04-05 12:35:49	12	4	2024-04-05
8	no	yes	9568	199	2024-04-03T12:42:43	#YouVah #CareerCoun	01	2024-04-03 12:42:43	12	2	2024-04-03
9	no	yes	3800000	9581	2024-03-27T12:30:55	#YouVahSummerInter	01	2024-03-27 12:30:55	12	2	2024-03-27
10	no	yes	5632	96	2024-03-23T12:30:13	#YouVahSummerInter	01	2024-03-23 12:30:13	12	5	2024-03-23
11	yes	no	7828	219	2024-03-21T12:30:13	#reels #trending #pass	10	2024-03-21 12:30:13	12	3	2024-03-21
12	no	yes	6838	135	2024-03-19T12:30:42	#YouVahSummerInter	01	2024-03-19 12:30:42	12	1	2024-03-19
13	no	yes	6977	149	2024-03-15T12:26:26	#YouVahSummerOppc	01	2024-03-15 12:26:26	12	4	2024-03-15
14	no	yes	267000	717	2024-03-12T12:30:23	#YouVahGraphicDesig	01	2024-03-12 12:30:23	12	1	2024-03-12
15	no	yes	492000	979	2024-03-09T12:30:14	#YouVahProCourses #	01	2024-03-09 12:30:14	12	5	2024-03-09
16	no	yes	19500	153	2024-03-06T12:30:42	#Youvah #LeadTheCon	01	2024-03-06 12:30:42	12	2	2024-03-06
17	yes	no	11700	409	2024-03-03T12:30:24	#FarewellPrep #YouVa	10	2024-03-03 12:30:24	12	6	2024-03-03
18	yes	no	6353	194	2024-03-03T07:13:23	#FarewellPrep #Youva	10	2024-03-03 07:13:23	7	6	2024-03-03
19	no	no	7871	186	2024-02-27T11:55:44	#YouVahAdventures #	00	2024-02-27 11:55:44	11	1	2024-02-27
20	yes	no	14800	345	2024-02-23T14:07:46	#exams #teenage #boa	10	2024-02-23 14:07:46	14	4	2024-02-23
21	no	yes	1400000	11500	2024-02-21T13:31:59	#TeenpreneurSuccess	01	2024-02-21 13:31:59	13	2	2024-02-21
22	no	yes	697000	7178	2024-02-19T12:43:42	#YouVahAdventures #	01	2024-02-19 12:43:42	12	0	2024-02-19
23	yes	no	11300	292	2024-02-11T13:48:05	#teenagers #teenlife	10	2024-02-11 13:48:05	13	6	2024-02-11
24	no	no	11400	213	2024-02-11T08:04:46	#internship #opportun	00	2024-02-11 08:04:46	8	6	2024-02-11
25	no	no	7193	204	2024-02-08T05:57:44	#MannKiBhadas #Pre	00	2024-02-08 05:57:44	5	3	2024-02-08
26	no	yes	17000	220	2024-02-03T16:56:50	#TeenTrailblazers #YouVahMastersUnion #	01	2024-02-03 16:56:50	16	5	2024-02-03

1	A	B	C	D	E	F	G	H
1	URL	Views	Likes	Comments	Datetime	Caption	hashtags	shtag_cou
2	https://www.instagram.com/p/C683FOGyPXu/	3.7m	289050	1003	2024-05-14 13:42:50	you've got this 🤝		0
3	https://www.instagram.com/p/C6tgxR3Sr3x/	385k	7876	111	2024-05-08 14:53:45	Curriculum itna cool aur p		0
4	https://www.instagram.com/p/C6oRfdut-j7/	297k	10188	71	2024-05-06 13:50:09	they really thought they co		0
5	https://www.instagram.com/p/C6jH0WqyDKY/	467k	9579	107	2024-05-04 13:48:25	BAG this 2 Cr+ TETR schola		0
6	https://www.instagram.com/p/C6gitm-teJE/	1m	41336	132	2024-05-03 13:46:04	that's not your lunch anyn		0
7	https://www.instagram.com/p/C6bfnRBNxzi/	385k	14794	117	2024-05-01 14:42:40	Friendly reminder 🤝		0
8	https://www.instagram.com/p/C6WO7INS1SM/	398k	14142	91	2024-04-29 13:40:21	Volume slow kar lo friend		0
9	https://www.instagram.com/p/C6RJdnbN9CR/	428k	7852	70	2024-04-27 14:17:04	2 CR+ SCHOLARSHIP 🤝 Y		0
10	https://www.instagram.com/p/C6EO9v_ygZB/	3.5m	2039654	9876	2024-04-22 13:54:57	🤝🤝🤝		0
11	https://www.instagram.com/p/C5_BIAAnM6Ou/	428k	9287	102	2024-04-20 13:22:23	We've upped our security		0
12	https://www.instagram.com/p/C58fbJXNN8W/	1.5m	75622	630	2024-04-19 13:44:28	₹10 mein kya aega guys?		0
13	https://www.instagram.com/p/C5ozMzeN0mR/	450k	10359	61	2024-04-16 14:03:31	oops?		0
14	https://www.instagram.com/p/C5qecnZNjYP/	769k	37733	120	2024-04-12 13:51:36	took us 4789032 days to n		0
15	https://www.instagram.com/p/C5gkltitD4/	532k	23341	144	2024-04-08 13:52:58	my brain's never been so		0
16	https://www.instagram.com/p/C5YlyP5yaUU/	489k	9859	110	2024-04-05 15:07:37	kisi ne dekha hai kya? 🤝		0
17	https://www.instagram.com/p/C5TPxt2Ntt8/	587k	24235	191	2024-04-03 13:19:38	paise lauta do yaar 🤝		0
18	https://www.instagram.com/p/C5OJQEitsnX/	889k	42531	807	2024-04-01 13:45:48	Join the waitlist today! Lin		0
19	https://www.instagram.com/p/C5Gzh1HN8ZZ/	273k	7742	74	2024-03-29 13:44:02	mind is either full of nons		0
20	https://www.instagram.com/p/C5D2fFTSPpo/	655k	28943	266	2024-03-28 13:49:12	Instagram got a new upda		0
21	https://www.instagram.com/p/C4xmOyVSYsN/	1.3m	63050	314	2024-03-21 11:40:53	Make a wish when you se		0
22	https://www.instagram.com/p/C4ITi2Pyi8g/	429k	11767	110	2024-03-15 13:06:37	What are you using your A		0
23	https://www.instagram.com/p/C4X-6oHyyTT/	465k	16120	130	2024-03-11 12:59:33	Decipher Aryan's to-do in		0

1	A	B	C	D	E	F	G	H
1	URL	Views	Likes	Comments	Datetime	Caption	hashtags	hashtag_count
2	https://www.instagram.com/p/C6v0yJgSgGH/	183566	6307	51	2024-05-09 12:16:24	#neet ug r #neet #tee		27
3	https://www.instagram.com/p/C68YweMo_qZ/	28272	1421	4	2024-05-14 09:26:33	Scored les #teenager		30
4	https://www.instagram.com/p/C66XYOBoF0Z/	25440	1367	19	2024-05-13 14:35:23	So what ai #students		30
5	https://www.instagram.com/p/C7JfCY1y43E/	11579	801	6	2024-05-19 11:57:26	Watch this #teenager		29
6	https://www.instagram.com/p/C7HJQtmSP-O/	27059	1394	19	2024-05-18 13:37:44	Most impc #teenager		27
7	https://www.instagram.com/p/C7EQLw6yzJU/	12437	815	10	2024-05-17 10:40:11	10+2 Hum #abhishek		29
8	https://www.instagram.com/p/C7DdWwKuSADc/	8704	495	7	2024-05-17 03:18:26	This caree #careers #		24
9	https://www.instagram.com/p/C7B5E-OSSGT/	11881	662	83	2024-05-16 12:38:22	Don't Mis: #parents #		26
10	https://www.instagram.com/p/C6_fRFNSwuy/	3337	357	0	2024-05-15 14:13:26	Liberal edi #highscho		16
11	https://www.instagram.com/p/C685Fa4yD-w/	131287	3582	59	2024-05-14 14:07:51	Simple Bc #teenager		30
12	https://www.instagram.com/p/C60vZ8ulegd/	30471	1390	20	2024-05-11 10:04:58	If your chi #maths #r		18
13	https://www.instagram.com/p/C6x73MfSimx/	22961	1338	14	2024-05-10 07:55:34	To find ou #careers #		24
14	https://www.instagram.com/p/C6s-OIPsdai/	23994	1452	10	2024-05-08 11:58:28	Are you di #teenager		28
15	https://www.instagram.com/p/C6ljr6LS1ZP/	13631	2322	4	2024-05-05 12:30:34	Us Mr. Be: #highscho		15
16	https://www.instagram.com/p/C6jLEYUy536/	13799	968	191	2024-05-04 14:20:17	Explore C #highscho		12
17	https://www.instagram.com/p/C6Qof2ISWSA/	10920	1469	1	2024-04-27 09:32:44	Kab tak aa #highscho		13
18	https://www.instagram.com/p/C6B39y6SQqz/	5905	472	15	2024-04-21 15:54:58	live with @wescopre		0
19	https://www.instagram.com/p/C5_JSuVSRKF/	7455	1416	2	2024-04-20 14:35:59	Nothing, j #highscho		13
20	https://www.instagram.com/p/C581L1kyv0Y/	3253	343	3	2024-04-19 16:54:24	Live with @kingspres		0
21	https://www.instagram.com/p/C52rfMgSA6b/	97109	3269	71	2024-04-17 07:37:47	Major Cha #cbse #cla		30
22	https://www.instagram.com/p/C52gSthSsuR/	50026	2849	71	2024-04-17 05:58:38	Classic Sci #teenager		17
23	https://www.instagram.com/p/C50YDmvSaeG/	6597	524	1	2024-04-16 11:43:54	Be Alert ! #teenager		25

	A	B	C	D	E	F
1	internship_title	company_name	location	start_date	duration	stipend
2	Java Development	SunbaseData	Work From Home	Immediately	6 Months	â' 30,000 /month
3	Accounting and Finance	DAKSM & Co. LLP	Noida	Immediately	6 Months	â' 5,000-10,000 /month
4	Sales & Digital Marketing	Bharat Natural Elements Private	Bangalore	Immediately	6 Months	â' 5,000 /month
5	Social Entrepreneurship	Hamari Pahchan NGO	Work From Home	Immediately	6 Months	Unpaid
6	Videography & Photography	Esquare Lifestyle	Bangalore	Immediately	6 Months	â' 12,000 /month
7	English Curriculum Writing	Team Everest	Work From Home	Immediately	6 Months	Unpaid
8	Search Engine Optimization (SEO)	Global Trend	Work From Home	Immediately	6 Months	â' 5,000 /month
9	Digital Dreamweaver: Internship C	Global Trend	Work From Home	Immediately	6 Months	â' 7,000 /month
10	Graphic Design	Expedify	Work From Home	Immediately	6 Months	â' 10,000-15,000 /month
11	Campus Ambassador	Internshala	Work From Home	Not specified	6 Months	â' 2000
12	Customer Support Management	ClearTax	Bangalore	Immediately	6 Months	â' 30,000 /month
13	Bilingual Content Writing	Aam Aadmi Party	Delhi	Immediately	6 Months	Unpaid
14	Office Operations	Aam Aadmi Party	Delhi	Immediately	6 Months	Unpaid
15	Design	Sanghvi Beauty & Technologies	Delhi	Immediately	6 Months	â' 10,000 /month
16	Copywriting	Sanghvi Beauty & Technologies	Delhi	Immediately	6 Months	â' 10,000 /month
17	Social Media And Influencer Mark	Hungama Digital Media Entertai	Mumbai	Immediately	6 Months	â' 5,000 /month
18	Customer Success	ClearTax	Bangalore	Immediately	6 Months	â' 20,000 /month
19	Instagram/TikTok Reel Creation	Across The Globe (ATG)	Work From Home	Immediately	6 Months	â' 1,500-2,500 /month
20	Corporate Sales	Across The Globe (ATG)	Work From Home	Immediately	6 Months	â' 2,000-2,500 /month
21	Affiliate Marketing	Across The Globe (ATG)	Work From Home	Immediately	6 Months	â' 2,000-2,500 /month
22	Product Management	Saregama India Limited	Mumbai	Immediately	6 Months	â' 5,000-10,000 /month
23	Influencer Marketing	Sukhshobh Sawa Trust	Work From Home	Immediately	6 Months	Unpaid

4.4 Advantages

The project provided several advantages for YouVah. The data-driven strategies developed during the internship improved the company's understanding of audience behavior and engagement patterns. The market research and competitor analysis offered valuable insights that informed content strategy development, leading to more effective and targeted social media campaigns. The integration of AI tools further enhanced YouVah's ability to analyze and optimize video content, contributing to increased engagement and a stronger online presence. Overall, the project supported YouVah's mission to empower teenagers by providing them with relevant and engaging content that aligns with their interests and aspirations.

V. FUTURE IMPLICATIONS

The work undertaken during my internship at YouVah holds significant implications for the company's future endeavors. By leveraging data-driven strategies to optimize social media engagement, YouVah is poised to strengthen its connection with teenage audiences across India. The insights gathered from web scraping and data analysis will continue to inform content strategies, ensuring that future campaigns resonate deeply with users' interests and preferences. Moreover, the integration of AI tools for content analysis presents an opportunity for YouVah to stay at the forefront of technological innovation in the education and career development sector. These tools can facilitate real-time analysis of video content, enabling YouVah to adapt swiftly to changing trends and user behaviors on social media platforms.

Furthermore, the comprehensive market research and competitor analysis conducted during the internship provide a strategic roadmap for YouVah's future growth. Understanding current social media trends and competitor strategies equips the company with valuable insights into emerging opportunities and potential threats. This knowledge will guide YouVah in refining its positioning and tailoring its offerings to better meet the evolving needs of teenage users. By continuing to refine and implement the recommended strategies, YouVah can expect to see sustained growth in engagement metrics, fostering a more vibrant and engaged community of young learners and professionals.

VI. CONCLUSION

My internship experience at YouVah has been profoundly enriching and impactful, both personally and professionally. Throughout the eight weeks, I immersed myself in the dynamic world of social media data analysis, market research, and content strategy development. This hands-on experience deepened my technical skills and broadened my understanding of how data-driven insights can drive strategic decision-making. Working alongside a talented team at YouVah has inspired me to pursue excellence in every project and to seek innovative solutions to challenges continuously.

The guidance and mentorship I received during my internship have been instrumental in my growth. I have learned the importance of collaboration, creativity, and adaptability in navigating complex tasks and projects. Each week presented new opportunities to apply what I learned in a practical context, from initial data scraping to the final integration of AI tools for content analysis. These experiences have equipped me with a robust skill set and a mindset geared towards continuous learning and improvement.

Looking ahead, I am excited about the future possibilities that lie ahead. The skills and insights gained from my internship at YouVah have prepared me to make meaningful contributions in the field of data analytics and digital strategy. I am grateful for the trust placed in me and for the opportunities to contribute to YouVah's mission of empowering young minds through early career exposure. This internship has reinforced my commitment to leveraging data-driven approaches to create positive impacts and to pursue a career that aligns with my passion for innovation and growth.