

**PROJECT REPORT DOCUMENTATION  
ON**

# **Dissecting the Digital Landscape**

**TEAM NO : 3**

**TEAM ID :FF8293076C62BF59C864C64D1BEF186D**

**DOMAIN : Data Analytics with TABLEU**

**TEAM LEAD : DANDIGUNTA SAI SATHWIK**

**TEAM MEMBER 01 : DANIEL C**

**TEAM MEMBER 02 : ELUMALAI B**

**TEAM MEMBER 03 : HITESH NAWIN L V**

## **1. INTRODUCTION**

1. Project Overview
2. Purpose

## **2. IDEATION & PROPOSED SOLUTION**

1. Problem Statement Definition
2. Empathy Map Canvas
3. Ideation & Brainstorming
4. Proposed Solution

## **3. REQUIREMENT ANALYSIS**

1. Functional requirement
2. Non-Functional requirements

## **4. PROJECT DESIGN**

1. Data Flow Diagrams
2. Solution & Technical Architecture
3. User Stories

## **5. CODING & SOLUTIONING (Explain the features added in the project along with code)**

1. Feature 1
2. Feature 2
3. Database Schema (if Applicable)

## **6. RESULTS**

1. Performance Metrics

## **7. ADVANTAGES & DISADVANTAGES**

## **8. CONCLUSION**

## **9. FUTURE SCOPE**

## **10. APPENDIX**

Source Code

GitHub & Project Video Demo Link

# 1. INTRODUCTION

## Project Overview

Dissecting the Digital Landscape: A Comprehensive Analysis of Social Media” is a research article or paper that provides a detailed and in-depth analysis of various social media platforms, including Facebook, Twitter, Instagram, YouTube, and LinkedIn. The analysis

Covers a wide range of topics related to social media, such as the history and evolution of social media, demographics of social media users, the impact of social media on Communication and society, the role of social media in politics and activism, and the Challenges and social media for businesses and organizations. The paper draws on a wide range of research studies, surveys, and data sources to provide Comprehensive overview of the digital landscape and its implications for individuals, organizations, and society as a whole. Overall, the paper aims to provide a comprehensive. And up-to-date understanding of the complex and dynamic world of social media (twitter as an example), and to inform future research, policy, and practice in this rapidly evolving field.

# **1. Purpose**

## **Content Marketing**

We keep content in the first place because, with content, marketing sails smoothly. Every medium, including website, email marketing, social media marketing, display marketing, etc., needs effective and trendy content to draw the attention of the target customers. Content plays a significant role in attracting buyers and influencing their buying decision. Besides, with the user base, the type of content also differs, and each platform needs diversified content to hook the customers.

## **Social Media Marketing**

With the increase in users, Social Media is where users prefer staying and connecting with others. Marketers use the opportunity to promote the products here to grab their eyeballs and educate them about the brand. Social media platforms provide a way to attract visitors to the website and make them aware of the available products. The marketing tools consist of paid and organic, both ways to attract traffic and ensure sales.

## **Search Engine Optimization (SEO)**

Search engine optimization helps navigate the website traffic and calculate the lead conversion. Curating the content with trendy keywords and applying the content at the proper places helps the visitors to land on the business website. Further, link-building site optimization helps rank the site on Google's first page; SEO plays a significant role in creating more visibility, opening the door to opportunities for better outreach and growth.

## **PPC Campaign**

A PPC campaign is a form of paid marketing where business owners allot funds to advertise on several online platforms. Internet marketers place the ad at the proper time and platform based on the nature of the business and the target buyers. PPC considers an effective marketing tool for calculating the traffic, the leads, and the conversion ratio. However, PPC comes under paid marketing that can fetch good traffic and ensure growth within a short time.

## **Email Marketing**

Another effective digital marketing landscape is email marketing. Powerful content with relevant infographics and visual graphics compels the receiver to open the mail. Once the receiver checks the products or services, they can become customers. Emails with relevant business

information help the mail receivers make the purchase decision. Big brands and large-scale industries mostly rely on email marketing to do business.

## **Video Marketing**

The video content market has emerged as watchers enjoy video more than just written content. Thus, video marketing has significantly increased for better outreach and to generate leads. Short-form video with relevant information and attractive script can go viral on several social media platforms, which ensure massive traffic and a good conversion ratio. The digital marketing landscapes help business owners reach their target buyers, ensure sales, and sustain the market. With the effective usage of digital marketing modules, the strategy is equally important and needs proper planning. In the next part, let's understand the strategy so that you can better sense how the internet marketing industry works.

## **2. IDEATION & PROPOSED SOLUTION**

### **Problem Statement Definition**

**Problem Statement :** Spending Too Much Time on Social Media

**Description:** As you have accounts on many social networking sites, do you spend time visiting each one too often?

**Impact:** you need to find ways to overcome this issue. So, the ONLY thing that works on such social networking sites is limiting your time and running off!!

Believe me, nothing else really works – tried and tested!

Social networking can be addictive and overwhelming at the same time. You need to learn to filter out the ‘noise’ to find something specific.

**Problem Statement:** Getting Addicted to Social Media

**Description:** Do you get so lost in your social media networks that you can't function if you aren't connected the online world? You feel lost, isolated, and become dependent, which can be dangerous

**Impact:** that people need a strong social media presence nowadays, and if you aren't online the main social networking sites, you're

missing out on a LOT, but you need to know how to handle it all.

Don't become dependent on such sites. Instead, find yourself some offline hobbies, friends, and ways to recreate so that you don't become addicted to the Internet.

### **Problem Statement:** The Update Syndrome

**Description:** Do you keep updating your status and remain busy reading the updates of others?

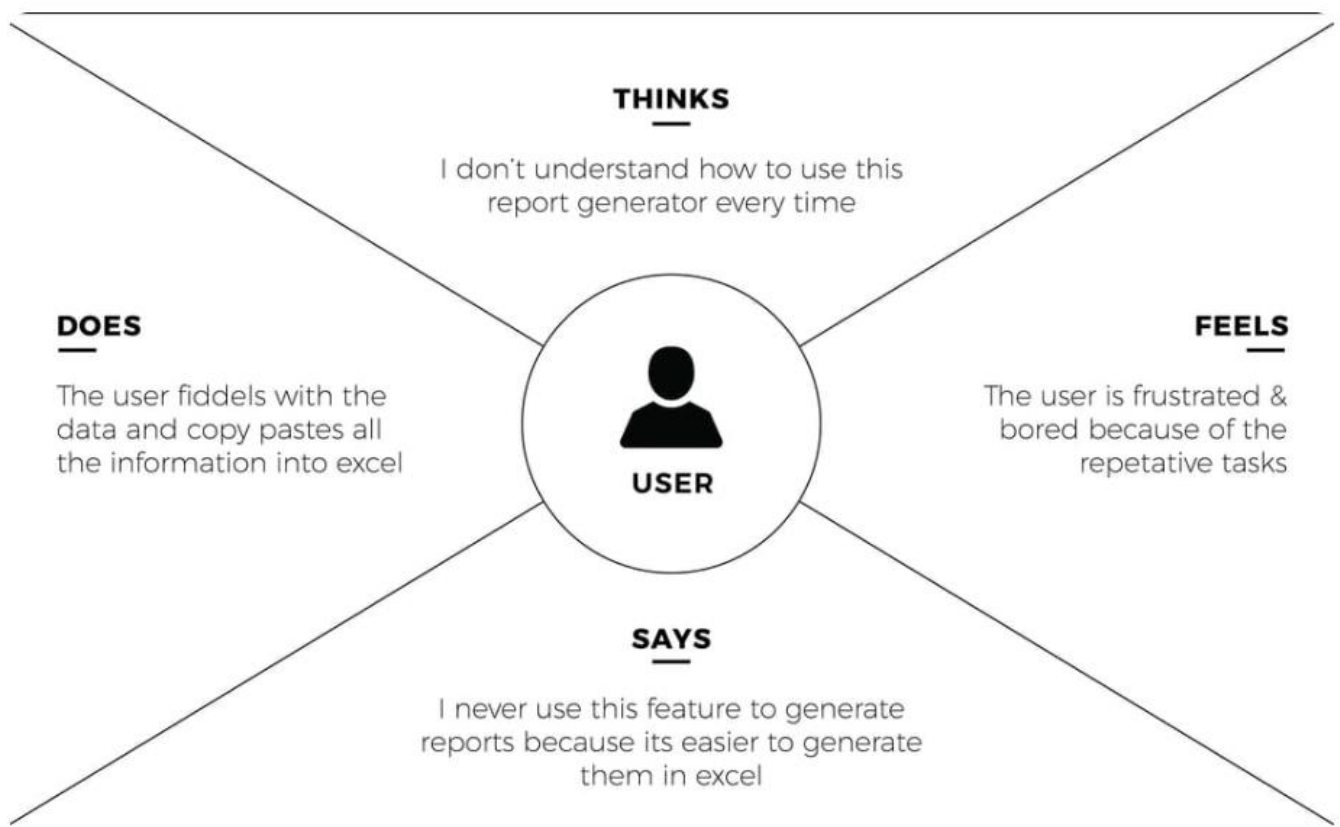
### **Impact:**

Chalk out a schedule and how much time you want to spend on such sites, visit them, share your update, quickly go through your notifications and messages, and move away. The more you stay and check out what others have shared, or see the invitation to play games, or visit unnecessary pages, the more time you waste



# Empathy Map Canvas

When creating a social media campaign, it's not just important to understand your message, it's critical to also understand your audience's beliefs, values, and feelings towards the topic at hand. Empathetic mapping is a tool that allows us to dive deep into the mindset of our target audience in a way that is both effective and actionable. By exploring four specific areas (seeing, hearing, thinking/feeling, and saying/doing), we can better understand our users from an emotional and psychological perspective, which can lead to more effective communication and engagement.



### 3. 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 amount 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.



## Brainstorm & idea prioritization

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.

- 🕒 10 minutes to prepare
- 🕒 1 hour to collaborate
- 👤 2-8 people recommended

💬 Share template feedback



**Need some inspiration?**  
See a finished version of the template to kickstart your work.

[Open example](#) →



### Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

A

#### Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B

#### Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

C

#### Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) →

1

## Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

### PROBLEM

How might we find a solution for the problems of competitive analysis of leading travel aggregators



### Key rules of brainstorming

To run an smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.

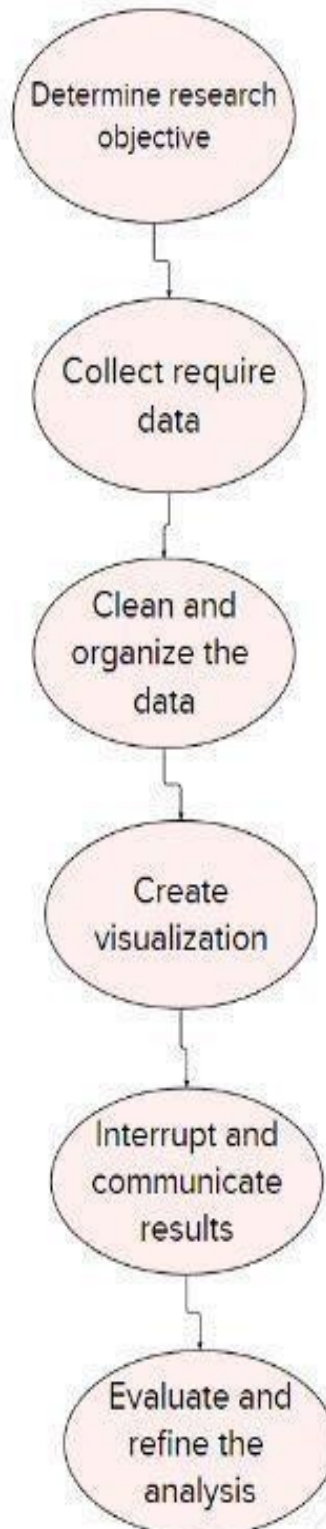
## Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

### TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.



4

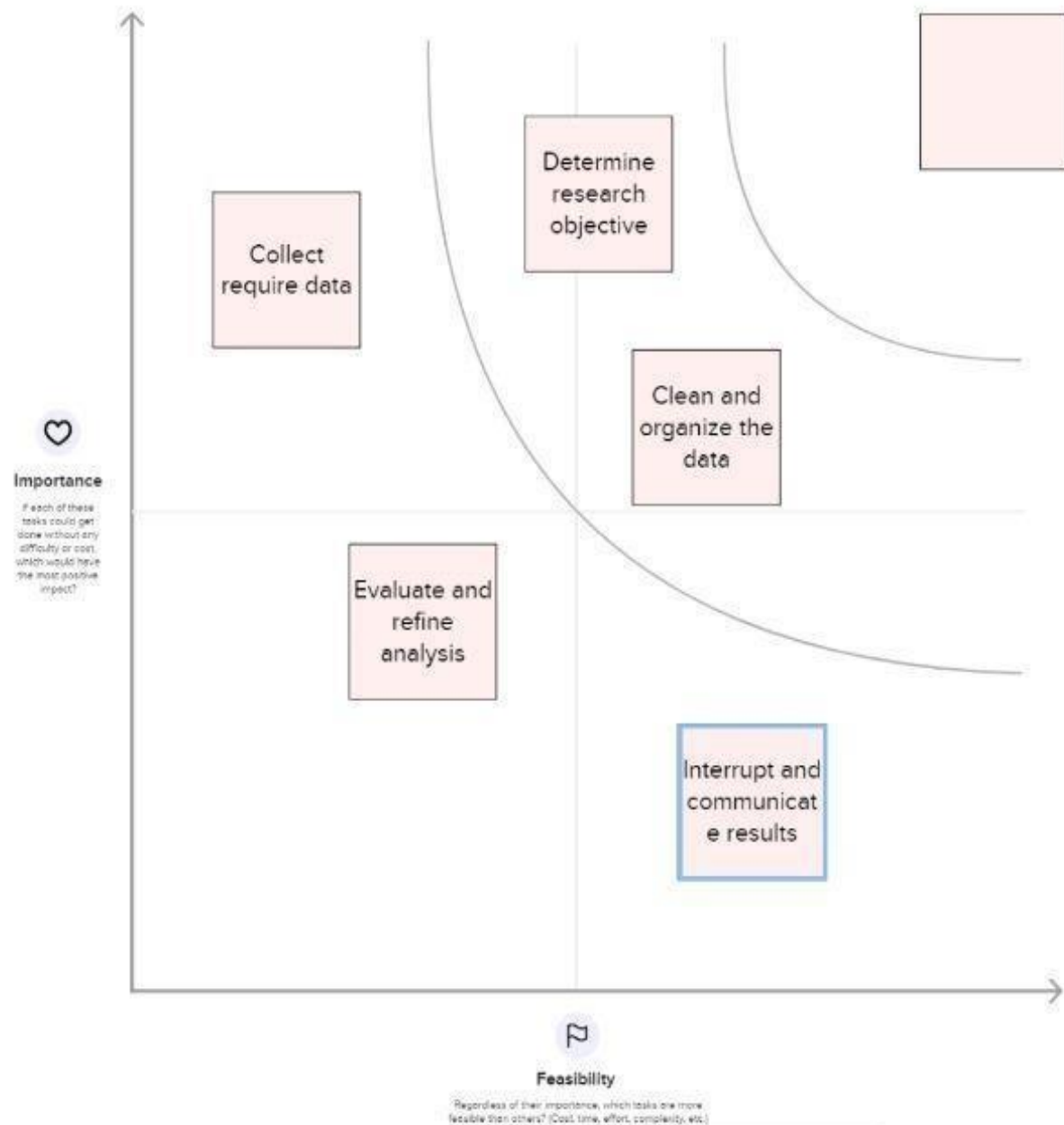
## Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

### TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.





## After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

---

### Quick add-ons

A

#### Share the mural

Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.

B

#### Export the mural

Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

---

### Keep moving forward



#### Strategy blueprint

Define the components of a new idea or strategy.

[Open the template →](#)



#### Customer experience journey map

Understand customer needs, motivations, and obstacles for an experience.

[Open the template →](#)



#### Strengths, weaknesses, opportunities & threats

Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.

[Open the template →](#)



[Share template feedback](#)

- **Proposed Solution**

### **Descriptive analytics**

Descriptive analytics answer the question “what is happening”? “What happened”? These types of analytics cluster similar types of data together in order to produce a cohesive view. Comments and posts can be grouped together, for instance, for the purpose of sentiment analysis (as offered, for instance, by our very own SentiOne platform). Any time you gather a lot of similar data points in order to analyse them looking for patterns, sentiments, and/or trends, you’re dealing with descriptive analytics.

### **Diagnostic analysis**

Diagnostic analysis focuses on the numbers: like counts, follower numbers, pageviews, reviews, shares, what have you. This type of analytics focuses on the performance of posts and campaigns and attempts to discern what made them successful. By comparing the performance of different campaigns, trends and consumer preferences can be discerned. Both diagnostic and descriptive analytics are reactive – that is, they are concerned with events that have already happened.

### **Predictive analysis**

In contrast, both predictive and prescriptive analytics are proactive – as in, they attempt to predict trends, events, and shifts based on existing data. It can range from simple things, like predicting possible visits to a location based upon posts



expressing that intention, to forecasting entire trends and phenomena based upon mentions. Social listening tools can help identify upcoming trends and shifts in consumer behaviour by analysing large volumes of social media data and indicating the shifting popularity of keywords.

### **Prescriptive analysis**

Finally, prescriptive analysis is the analysis of data with the intention of providing the best way to proceed at any given moment. This can be applied to situations ranging from handling social media crises and incidents (“how well does this type of apology track with our target audience?”) to purchase preferences (“we’ve identified this group of customers – how do we optimise our sales process to their habits?”). Although it’s an incredibly useful form of analysis, it requires a lot of data in order to truly show its potential.

### **Closing words**

All manner of social media activity requires good analytics. Knowing how to understand and use your data can take you very far – provided, of course, you know what you’re looking for.

If you’re interested in doing a little bit of analysis yourself, social media reporting tools with excellent reporting capabilities

### 3. REQUIREMENT ANALYSIS

#### 1. Functional requirement

The user needs to have confidence in the social media platform to deliver a fast and reliable service.

**Reliability:** the social media platform and services must be reliable. An unreliable infrastructure is likely to detract from the learning experience and obstruct the educator. It will become a frustration to learners, educators, managers and administrators alike if devices, applications and services cannot be relied upon.

**Coherence:** With the variety of competing platforms, it is important that an institution ensures coherence by implementing platforms that work together and fit with the overall ICT strategy. Eg Yammer integrates with students O365 offering.

**Accessibility:** on-screen text cannot be seen by those with serious visual impairment; it may be hard to interpret for those with dyslexia, learning or language difficulties; and users with physical or neurological problems may be unable to use a keyboard or mouse or touch screen.

This lack of equality can be mitigated by the use of 'assistive technology eg Users who are unable to use a keyboard can be supported by voice-activated software, so they control it by speech, And a screen-reader can read text aloud for users who

cannot see it IF the social media client provides access to assistive technology. The Equality Act outlines duties on educational institutions with respect to the provision they offer to learners with special educational needs and/or disabilities. This requires 'reasonable adjustments' to ensure that these learners are not put at a substantial disadvantage in using any facilities or resources.

**Affordability and sustainability:** All services need to support energy conservation and wider environmental sustainability. They should be energy efficient in themselves by offering a range of devices, applications and services that incorporate energy-saving technology, management and other measures. Learners, educators and administrators should have a clear understanding of the impact the technology has on the environment, in particular carbon emissions.

While institutions can often identify the immediate costs of a new ICT resource, the total cost of ownership (TCO) must be considered in order for the institution to be able to sustain a resource. Consideration should therefore be given not just to purchase price and running costs but also decommission and transition costs to future services.

The cheapest solution may not always be the most cost effective when taking these into consideration.

Ideally a social media user should be able to communicate with other staff and learners and be confident that they will be protected from access to or distribution of inappropriate content and from unsolicited contacts.

The platform would allow sharing and exchange information in different formats and with different people – other staff.

## **Non-Functional requirements**

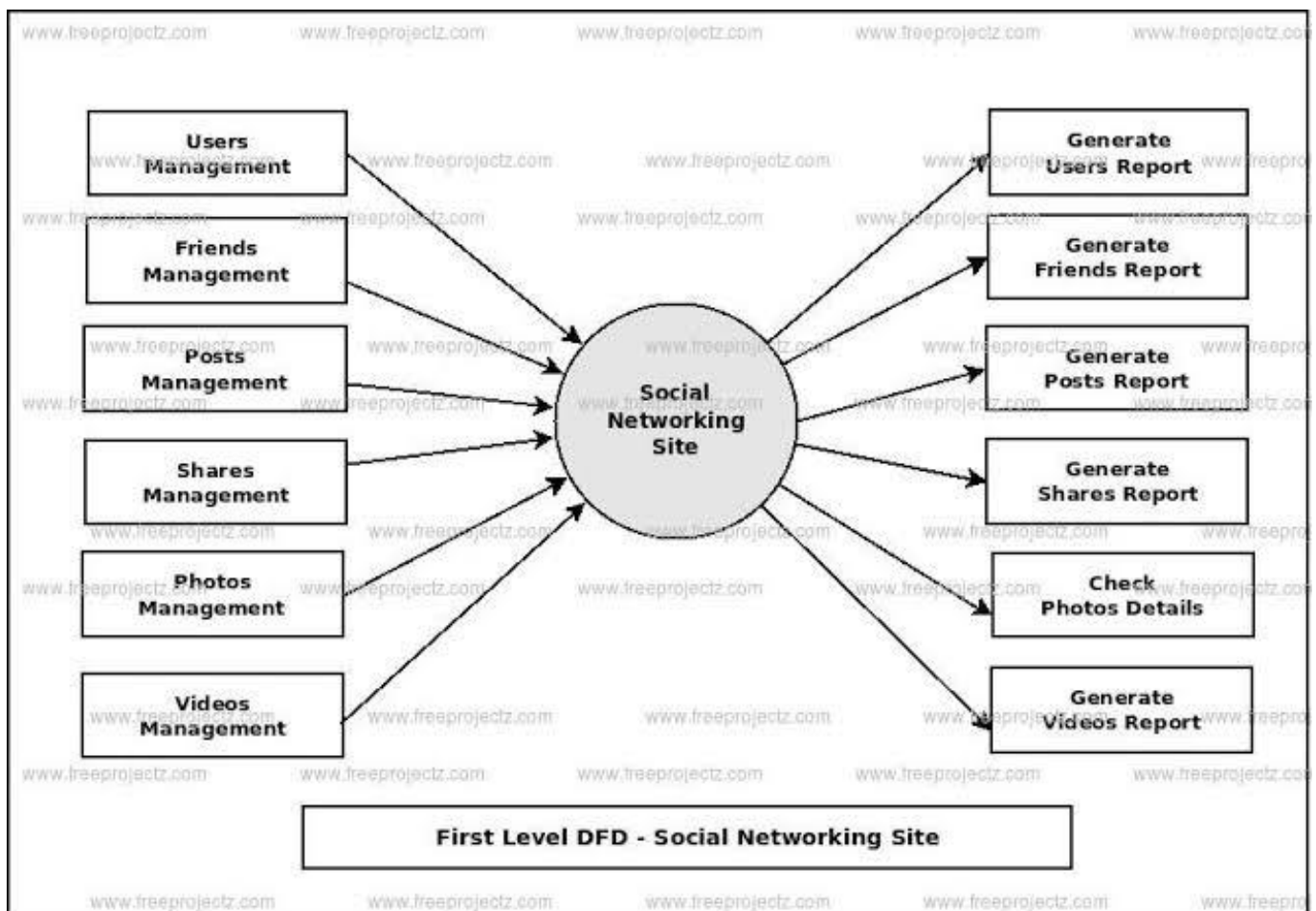
Non-functional requirements are often overlooked in social media analysis, but they can be the key to truly understanding how your social media presence is performing. Non-functional requirements refer to qualities that a system or service should have to ensure it's working at an optimal level. For example, page speed can be a non-functional requirement for a website. On social media, factors such as reach, engagement, and overall sentiment can provide important insights into your users' behavior. In order to get the most out of social media, it's important to regularly track these metrics and understand how they can be optimized for better performance.

## 4. PROJECT DESIGN

### 1. 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.

Example: [\(Basic algorithm\)](#)



## **User Stories :**

### **The Professional**

Whether it's for personal or professional gain, The Professional is looking to expand their network. Professionals use social media to demonstrate their intelligence by sharing their stance on important issues and trends. The Professional is known to post often and uses a considerable amount of time on each post before actually sharing. You could say that their followers view them as credible thinkers. The Professional is ideal for consuming thought-provoking articles, press releases and insightful blog posts.

### **The Creator**

They're innovative, sometimes hipster and definitely set trends. With the internet as their blank canvas, Creators feel inspired to share their pioneering ideas with the world. They enjoy taking pictures, writing blogs and utilizing any platform that allows them to express their thoughts. Ultimately, the Creator's followers look to them for the latest trends. Marketers should recognize those Creators rising in fame, as they have the potential to become useful influencers and brand ambassadors.

## **The Sharer**

Brie is always posting, sharing and comment on social posts. Yep, she's definitely a sharer. Sharers are known to be thoughtful individuals who enjoy helping others through social media. You can see them sharing YouTube tutorials, informative articles and product reviews. Heck, sometimes they're sharing articles to raise awareness and money. Although Sharers may or may not have substantial influence, they are certainly capable of spreading the word. For your company that could be good or bad. Make sure to pay close attention to their concerns and respond to negative reviews.

## **The Bonder**

Bonders are the "social butterflies" of the world. This group is highly active on social media and checks their feed several times a day. Bonders put a great deal of importance on building and cultivating relationships. They tend to have a decent number of followers and engage with their followers by constantly liking and commenting on posts. Bonders make up a large portion of social media users and it's important that a company captures the attention of these users by intriguing photos and stories.

The old saying, "Be a leader, not a follower", does not mean much in the digital world. We are all leaders and followers. Understanding the motives of

your followers will help you to establish a strong brand image. Keep your followers happy and you can build trust through an organic medium that cannot be built through paid advertising. Do you need some guidance on who your followers are? Reach out and let us help.

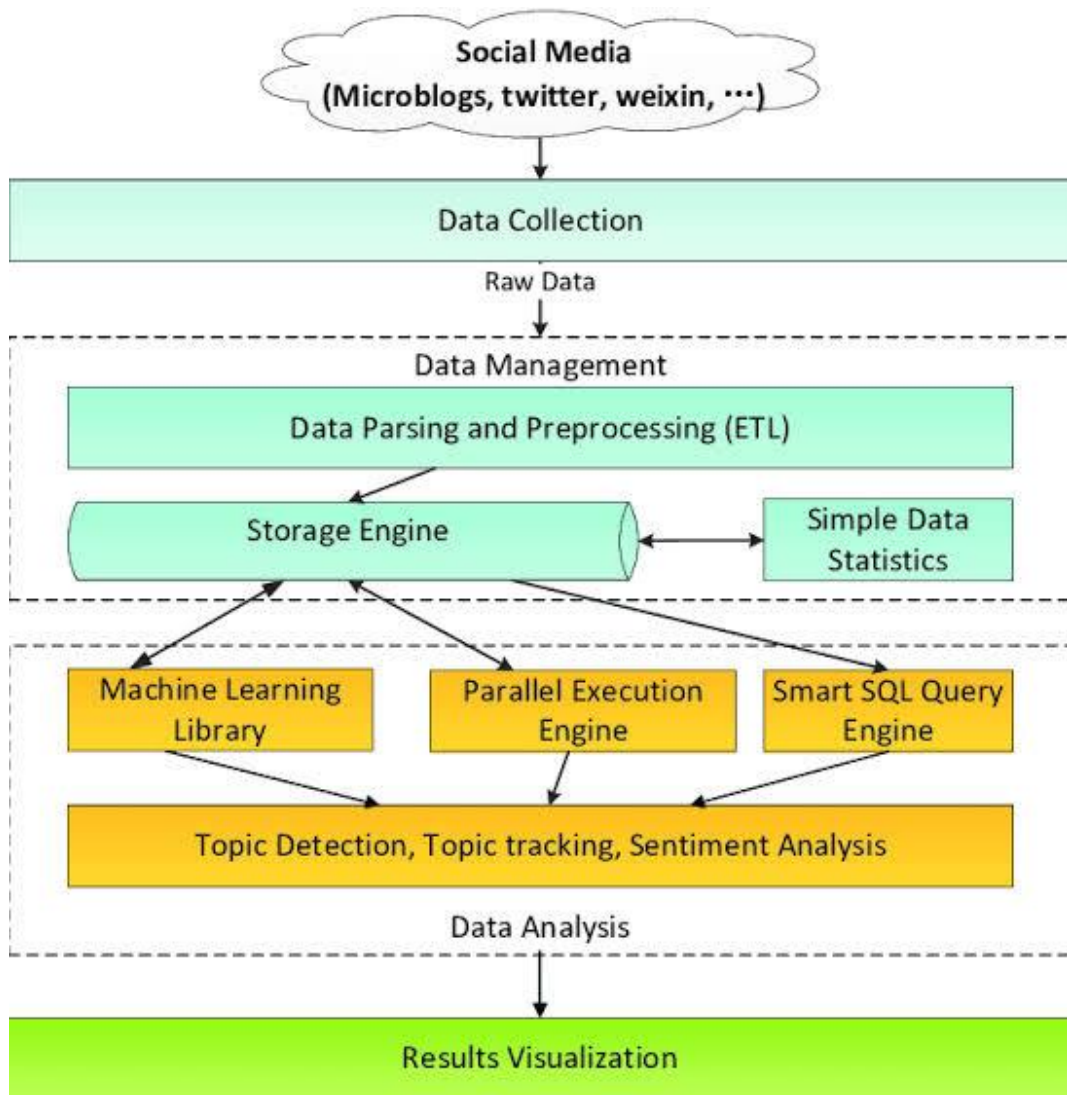


## 2. Solution & Technical Architecture

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, behavior, 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.

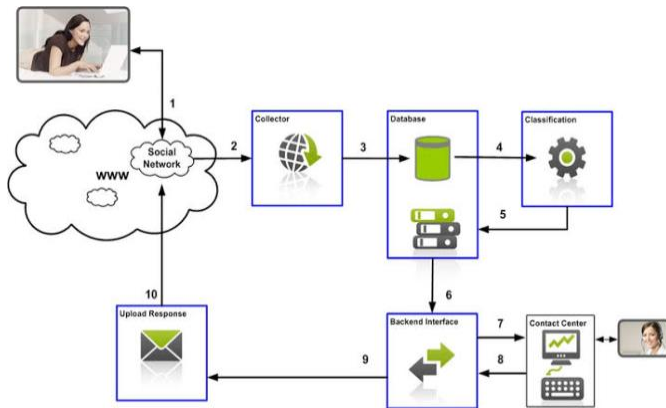
# Solution Architecture Diagram



## Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example:



### Guidelines

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

## Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g.Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js /React Js etc.
2.	Search and Data Aggregation	the process of gathering and organizing information from various sources	GraphQL,JSON or XMLparsers,andredis
3.	Data processing and Storage	Efficient handling and organization of information	MySQL,Oracle,NoSQL and ApacheSpark
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc
5.	CMS	CMS software platform that allows users to create,organize, and manage digital content for websites or other online applications.	WordPess,Drupal,(CDN)-Akamai,Cloudflare
6.	File Storage	File storage requirements	IBM Block Storage or Other StorageService or Local Filesystem
7.	User Management and Authentication	Seamlessly control user access and verifyidentities for secure content interactions."	OpenID Connect,JWT,bcrypt or Argon2
8.	Analytics and reporting	Analytics and reporting involve extracting insightsfrom data to drive informed decision-making.	Google analytics,mixpanel,d3.js orchart.js
9.	External APIs	External APIs used in the application	REST or SOAP protocols.
10.	Infrastructure and Scalability	Application Deployment on Local System / CloudLocal Server Configuration: Cloud Server Configuration :	AWS,GCP,Microsoft azure,Kubernetes Nginx,HAProxy.

## Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	Implement strong encryption algorithms to protectsensitive data at rest	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.

S.No	Characteristics	Description	Technology
3 .	Scalable Architecture	A scalable architecture allows the system to handle increased workloads or growing user demands without sacrificing performance.	Technology used
4 .	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5 .	Performance	Architecture should be designed to optimize performance, aiming for efficient resource utilization and responsiveness	Technology used

## References:

<https://www.dataanalysis.com/>

[https://www.simplilearn.com/data-analysis.](https://www.simplilearn.com/data-analysis)

## 5. CODING & SOLUTIONING

### 1. Feature 1

```
[2] from py2neo import Graph
    from py2neo import Node
    from py2neo import Relationship
    import pandas as pd
```

Establish a Connection

```
graph = Graph("bolt://54.236.42.110:7687",
              user="neo4j",
              password="")
```

Social Media Nodes

[ ] 1 cell hidden

User Nodes

[ ] 2 cells hidden

```
+ Code + Text
Social Media Nodes
```

```
Instagram = Node("Social_Media", title="Instagram", tagline="Capture and Share the World's Moments")
Facebook = Node("Social_Media", title="Facebook", tagline="It's quick and easy")
WhatsApp = Node("Social_Media", title="WhatsApp", tagline="Hey there, I am using WhatsApp")
SnapChat = Node("Social_Media", title="SnapChat", tagline="The fastest way to share a moment")
Youtube = Node("Social_Media", title="Youtube", tagline="Broadcast Yourself")
Twitter = Node("Social_Media", title="Twitter", tagline="Here, your voice matters")
LinkedIn = Node("Social_Media", title="LinkedIn", tagline="Sum up your Professional brand")
```

User Nodes

[ ] 2 cells hidden

Storing Nodes in Graphs

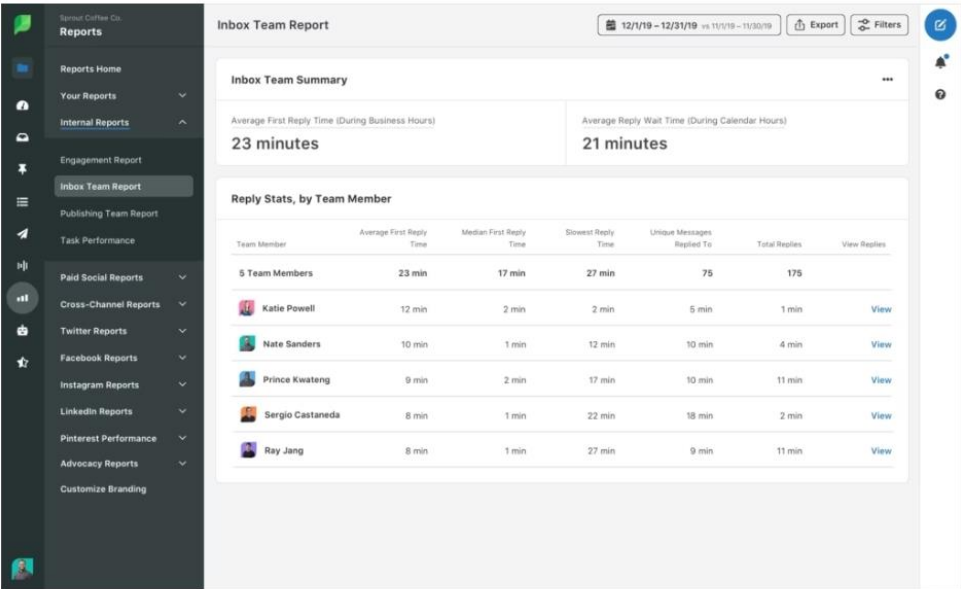
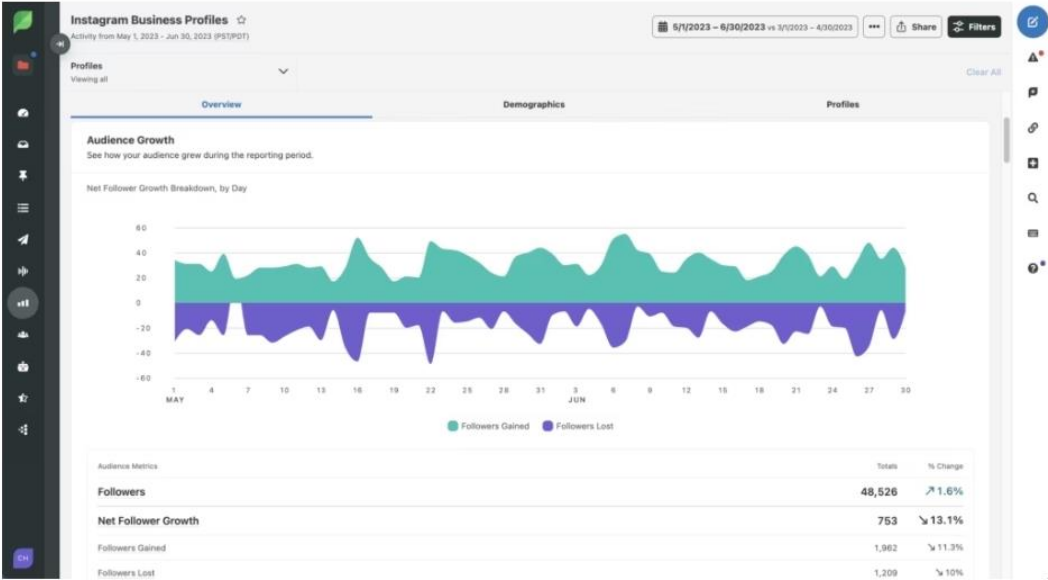
[ ] 2 cells hidden

```
+ Code + Text
WHERE p.sex="Female"
SET p.surname = 'Female'
RETURN s.title, COUNT(*),p.surname AS count
ORDER BY count DESC
***
result5 = graph.run(query5)
for d in result5:
    print(d)
```

title	count	surname
'Instagram'	3	'Male'
'WhatsApp'	7	'Male'
'Twitter'	3	'Male'
'LinkedIn'	3	'Male'
'Facebook'	4	'Male'
'SnapChat'	3	'Male'
'Youtube'	2	'Male'
'WhatsApp'	5	'Female'
'LinkedIn'	2	'Female'
'SnapChat'	1	'Female'
'Youtube'	3	'Female'
'Instagram'	4	'Female'
'Facebook'	3	'Female'
'Twitter'	2	'Female'

# 6. RESULTS

## 1. Performance Metrics



### Customer Feedback

Activity from Jan 1, 2023 - Jun 30, 2023 (COT)

1/1/2023 - 6/30/2023 vs 7/1/2022 - 12/31/2022

Share Filters

Sources  
Viewing all

Clear All

#### Feedback Activity

Feedback Requests 55	Feedback Completed 15	Completion Rate 27.3%
-------------------------	--------------------------	--------------------------

#### Feedback Results

Feedback Count, by Score

Feedback Count	Count
1	1
3	2
4	1
5	3
6	2
7	1
8	3
10	2

Feedback Score Metrics

Average Score	5.93	Average Feedback increased by 12.7%
---------------	------	----------------------------------------



## **7. ADVANTAGES & DISADVANTAGES**

### **ADVANTAGES**

If you've ever gone head-to-head with a competitor, you know that some healthy competition can light a match under you and ensure you stay on your toes when it comes to your business. These are the positive attributes of competition. It encourages you to do your best, be your best, and keep moving forward.

It also allows you to discover new tactics and find new ways of doing things if you pay attention to what your customers are already doing.

When you monitor your competitors closely, for example, you can discover new keywords you should be targeting, new platforms you should be using, and new products it might pay to spearhead.

When used correctly, competition can even boost teamwork, decrease boredom in your organization, and encourage higher (And higher-quality) output.

## DISADVANTAGES

- While digital marketing competition can (and will) drive you to put more work, work faster, and work harder, it also has its fair share of drawbacks. These drawbacks include the following:
- **More pressure to make decisions.** There's a world where making decisions quickly is a good thing, and there's a world where it's a liability. If you find yourself making decisions rashly and rapidly just because your competitors are moving so quickly, you're in a dangerous zone. With this in mind, be sure that competition never drives you outside of yourself or your company. If it does, you risk putting your values on the line in the name of keeping up.
- **Distorted priorities.** Along the lines of pressure to make decisions is a feeling of distorted priorities. Is social media really where you need to be focusing your efforts, or are you only doing it because your competitors are? These are significant questions to consider as you move forward alongside your competition.
- **A more crowded field.** While some competition will enhance the companies it touches, too much competition will make it tough for anyone but the top handful of companies to succeed. If you're in a field that's too competitive, you may find that you have a difficult time

## **8. CONCLUSION**

Establishing your brand in this highly competitive market is challenging, though not difficult. Proper marketing plans and strategies can ensure outreach, which again influences the leads and the conversion ratio. However, the digital marketing landscape offers a vast opportunity to launch your business using the massive user base and land on your target buyers in real-time. The existing business owners can expand their horizons using the digital marketing landscape after adopting smart strategies to secure growth.

## 9. FUTURE SCOPE

Strategy in any business refers to the planning section. Thus, digital marketing is no exception. As the digital marketing landscape is vast and vivid, it needs apt planning before jumping into the internet for marketing. The strategy consists of several layers of techniques that include

**Set the Target Market** – Target markets differ based on the business nature, products, or services. For example, if you're selling baby products, your target market would be new parents and mothers because they make the decision about which things are good for their babies. Similarly, technical gadgets and kitchen utensils have a different market. You need to define which market is for your product or service.

**Marketing Objectives** – Your next move will be the marketing objective, which means your business goal and when you want to achieve it. Because based on your goals and target, you need to make the marketing planning for effective outreach.

**Fix the Budget** – Next comes the budget or funding for marketing. Organic marketing can be limited and delay your goals. Here comes the importance of the budget because the funds can determine the paid marketing plans. Further, you must keep the budget plan to support sudden and unexpected

**Make the Plan** – After designing the budget, you must make the marketing plan to achieve the business goals. In the plan frame, you can add specific long-term and short-term marketing schedules so that if one fails to achieve the target, you have a stand-by option to support the ongoing marketing process. Besides, marketing platforms and marketing duration are also part of the full-proof marketing plan.

The above-noted strategies are the industry standard that ensures that you can attain every possible way to reach out to your buyers to do business.

## 10. APPENDIX

### Source Code

```
pip install vaderSentiment
```

```
list_of_products = ["samsung", "apple", "xiaomi", "huawei", "amazfit", "oneplus"]

for column in ["Title", "Text", "Comment_text"]:
    for product in list_of_products:
        l = []
        for text in data[column]:
            l.append(product in text.lower())
        data["{}_{}".format(column, product)] = l
```

```
# Import VADER and pandas
from vaderSentiment.vaderSentiment import SentimentIntensityAnalyzer
import pandas as pd

analyzer = SentimentIntensityAnalyzer()

# Load data
data = pd.read_json("./sample_data/data.json", lines=True)

# Initialize lists to store sentiment values
title_compound = []
text_compound = []
comment_text_compound = []

for title, text, comment_text in zip(data.Title, data.Text, data.Comment_text):
    title_compound.append(analyzer.polarity_scores(title)["compound"])

    text_compound.append(analyzer.polarity_scores(text)["compound"])

    comment_text_compound.append(analyzer.polarity_scores(comment_text)["compound"])

# Add the new columns with the sentiment
data["title_compound"] = title_compound
data["text_compound"] = text_compound
data["comment_text_compound"] = comment_text_compound
```

```
for product in list_of_products:
    mean = pd.concat([data[data["Title_{}".format(product)]]["title_compound"],
                     data[data["Text_{}".format(product)]]["text_compound"],
                     data[data["Comment_text_{}".format(product)]]["comment_text_compound"]]).mean()
    print("{}: {}".format(product, mean))
```

# GitHub & Project Video Demo Link

GitHub Link