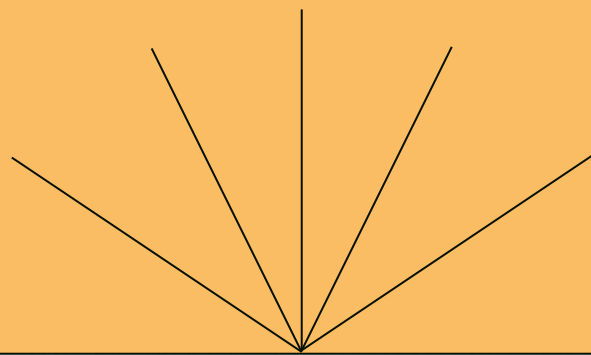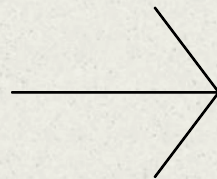# Social Media Analysis

Domain: Social Media Management
Function: Content Strategy and User Engagement Optimization

PROBLEM STATEMENT

While the social media platform shows active user engagement and clear trends in content preferences, there are opportunities to optimize hashtag usage, leverage influential users, and enhance regional content strategies. The platform faces challenges in balancing the influence of top users, capitalizing on trending topics, and ensuring consistent engagement across different content types and geographical regions. Additionally, there's a need to understand and replicate the success factors of highly bookmarked posts and active commenters to boost overall user interaction and content visibility.

OBJECTIVE

The primary objective is to enhance user engagement, expand the platform's reach, and optimize content strategy across the social media platform. This involves leveraging popular hashtags, nurturing influential users, encouraging active participation, and understanding regional content preferences. The goal is to increase overall user activity, improve content visibility and interaction rates, and create a more balanced and dynamic user ecosystem that fosters growth and engagement across all user segments and geographical areas.

Tools Used

Analytical & Visual:

- MySQL

Presentation:

- Microsoft power point

SECONDARY INSIGHTS

```sql
1  -- Most Used hashtag
2  SELECT hashtag_name, COUNT(h.hashtag_id) as frequency from hashtags h
3  JOIN post_tags p
4  ON h.hashtag_id=p.hashtag_id
5  GROUP BY hashtag_name
6  ORDER BY frequency DESC;
```

#beautiful

is most used hashtag but #festival and #socialmedia is not far behind

hashtag_name	frequency
#beautiful	21
#festivesale	19
#socialmedia	19
#followme	18
#love	17
#REOPEN colleges	16
#cute	15
#me	15
#tbt	14
#kisaansupport	14
#photooftheday	14
#family	13
#studentlivesmatter	13
#picoftheday	13
#happy	12
#joinbtsarmy	12
#runforunity	12
#party	11
#fitnessfreak	11
#enjoy	11
#like4like	11
#christmas	10

SECONDARY INSIGHTS

```sql
1  -- User With Most Follower
2  SELECT user_name,followee_id,COUNT(follower_id) AS number_of_followers FROM follows f
3  JOIN users u  ON f.followee_id = u.user_id
4  GROUP BY followee_id;
```

Arthur & logan

Are most followed but Omicron is just 1 follower behind

user_name	followee_id	number_of_followers
Arthur	1	41
Logan	2	41
Omicron Larson	3	40
Sahib Singh	4	37
William	5	37
raj gupta	6	35
Lewis	7	37
George	10	35
Harrison	11	34
Freddie	12	38
Jack	13	37
James	14	45
sanjay	15	42
Ethan	16	35
Sakshi Warandani	18	35
Oscar	20	41
Axel Sivert Anker	21	37
Jacob	25	34
Ollie	26	32
Hunter	27	41
Finlay	29	40
Leo	30	34
Harris	33	38
Jamie	34	34
Daniel	36	36
Brodie	37	35
Cameron	38	41
Steven	40	38
Adam	41	38

SECONDARY INSIGHTS

```
1  -- Most active users in terms of posting
2  SELECT u.user_name, COUNT(post_id) AS number_of_posts FROM posts p
3  JOIN users u
4  ON u.user_id = p.user_id
5  GROUP BY u.user_name
6  ORDER BY number_of_posts DESC;
```

Brodie

is most active user and he is 6 followers short of being top followed user

user_name	number_of_posts
Brodie	6
Lewis	5
Alexander	5
Steven	5
William	4
James	4
Cameron	3
Theo	3
Ollie	3
Sahib Singh	3
Leo	3
Max	3
Oscar	3
Harrison	3
Mason	3
Omnicron ...	3
Finlay	3
Daniel	2
Harry	2
raj gupta	2
Joshua	2
Jack	2
Ethan	2
Sakshi Wa...	2
Noah	2

SECONDARY INSIGHTS

```sql
1  -- Most active locations
2  SELECT location,
3  COUNT(post_id) as frequency FROM posts
4  GROUP BY location ORDER BY frequency DESC
5  LIMIT 10;
```

Most post is given from

Maharashtra

location	frequency
maharashtra	9
karnataka	5
gujarat	4
uttar pradesh	4
kerala	3
The Taj Mahal, Agra.	2
Pangong Lake, Ladakh.	2
Jaisalmer Fort, Jaisalmer.	2
Ruins of Hampi, Karnataka.	2
jammu and kashmir	2

SECONDARY INSIGHTS

```sql
1  -- Most bookmarked posts
2  SELECT post_id,COUNT(user_id) AS times_bookmared FROM bookmarks
3  GROUP BY post_id ORDER BY times_bookmared DESC;
```

Top 5 posts

are most bookmarked

post_id	times_bookmarked
95	5
62	5
16	5
59	5
77	5
31	4
45	4
66	4
56	4
58	4
29	4
71	3
3	3
67	3
6	3
89	3
47	3
80	3
17	3
49	3
41	3
74	3
57	3

SECONDARY INSIGHTS

```sql
1   -- Users with the highest comment engagement
2   SELECT u.user_name,cl.user_id, COUNT(cl.comment_id) AS number_of_comments
3   FROM comment_likes cl
4   JOIN users u ON cl.user_id=u.user_id
5   GROUP BY u.user_name,cl.user_id
6   ORDER BY number_of_comments DESC LIMIT 10;
```

Jacob

made most comments

user_name	user_id	number_of_comments
Jacob	25	15
Aaron	22	12
Finn	32	11
Omnicron Larson	3	11
Finlay	29	11
Max	9	11
Liam	50	11
Leo	30	10
raj gupta	6	10
Jack	13	10

SECONDARY INSIGHTS

```sql
1  -- Post with highest engagement
2  SELECT pl.post_id,p.caption,COUNT(DISTINCT(pl.user_id)) AS number_of_likes,
3  COUNT(DISTINCT(c.comment_id)) AS number_of_comments,
4  COUNT(DISTINCT(pl.user_id))+COUNT(DISTINCT(c.comment_id)) AS total_engagement
5  FROM posts p
6  JOIN post_likes pl ON p.post_id=pl.post_id
7  JOIN comments c ON p.post_id=c.post_id
8  GROUP BY p.caption,pl.post_id
9  ORDER BY total_engagement DESC;
```

Top 2

post have almost
Similar engagement

post_id	caption	number_of_likes	number_of_comments	total_engagement
42	Mirror: "You look cute today." Camera: "LOL, no."	24	4	28
58	Selfie Time!	23	4	27
69	Keep calm and take a selfie.	21	4	25
16	A selfie is worth a thousand words.	23	2	25
59	Simplicity is the key to brilliance.	21	4	25
49	Life is better when you're smiling.	21	4	25
48	I am not a selfie expert.	22	2	24
76	Normal is boring for me.	23	1	24
83	If you cannot do great things, do small things in…	18	6	24
64	Dinner time is selfie time.	22	2	24
2	Live a good story.	21	3	24
30	.///.	21	3	24
66	All-natural.	20	3	23
62	May your day feel as good as taking this perfec…	21	2	23
74	Dress like you're already famous!	22	1	23
81	Being sexy is about attitude possessed, not a b…	20	3	23
10	I have more issues than vogue.	21	2	23
27	…	19	3	22
24	…..	21	1	22
23	,,,,	20	2	22
85	Coffee in one hand, Confidence in other.	20	2	22
29	…..	16	6	22
15	Cinderella never asked for a prince.	21	1	22
40	But first… let me take a selfie.	21	1	22
12	Ah, a perfectly captured selfie!	20	2	22
88	Seek respect, not attention.	21	1	22

```sql
1  -- Users with the highest ratio of received likes to posts
2  SELECT user_name,u.user_id,COUNT(DISTINCT(p.post_id)) as number_of_posts,
3  COUNT(pl.user_id) AS number_of_likes,
4  CAST(COUNT(pl.user_id) AS FLOAT) / COUNT(DISTINCT p.post_id) AS likes_per_post
5  FROM users u
6  JOIN posts p ON u.user_id=p.user_id
7  JOIN post_likes pl ON p.post_id=pl.post_id
8  GROUP BY u.user_id,user_name
9  ORDER BY likes_per_post DESC;
```

user_name	user_id	number_of_posts	number_of_likes	likes_per_post
sanjay	15	1	21	21
Callum	28	1	21	21
Charlie	39	1	21	21
Harry	35	2	41	20.5
Finn	32	1	20	20
Alfie	19	2	39	19.5
Jack	13	2	39	19.5
Arthur	1	1	19	19
Hunter	27	2	38	19
Aaron	22	1	19	19
Oscar	20	3	56	18.66666666...
raj gupta	6	2	37	18.5
Joshua	44	2	37	18.5
Alexander	47	5	92	18.4
Sahib Singh	4	3	55	18.33333333...
Theo	23	3	55	18.33333333...
Logan	2	1	18	18
Max	9	3	54	18
Ollie	26	3	54	18
Leo	30	3	54	18
Freddie	12	1	18	18
Brodie	37	6	107	17.83333333...
Omnicron ...	3	3	52	17.33333333...
Cameron	38	3	52	17.33333333...

Sanjay, Callum and Charlie

has most post to like ratio of 21.
But they made only one post

SECONDARY INSIGHTS

```sql
1  -- Users with the most diverse hashtag usage
2  WITH hashtag_count_by_user AS(
3  SELECT u.user_name,hf.user_id,
4  COUNT(hf.hashtag_id) AS frequency,
5  RANK() OVER(ORDER BY COUNT(hf.hashtag_id) DESC) AS user_rank
6  FROM hashtag_follow hf
7  JOIN users u ON hf.user_id=u.user_id
8  GROUP BY u.user_name,hf.user_id ORDER BY frequency DESC)
9  SELECT * FROM hashtag_count_by_user WHERE user_rank=1;
```

Sahib Singh
uses most diverse hashtags

user_name	user_id	frequency	user_rank
Sahib Singh	4	2	1
kanavphull	8	2	1
Ethan	16	2	1
Sakshi Warandani	18	2	1
Axel Sivert Anker	21	2	1
dettol sharma	45	2	1

SECONDARY INSIGHTS

```sql
1  -- Hashtag follow trends
2  SELECT h.hashtag_name,hf.hashtag_id, COUNT(hf.user_id) as frequency
3  FROM hashtag_follow hf
4  JOIN hashtags h ON hf.hashtag_id = h.hashtag_id
5  GROUP BY h.hashtag_name,hf.hashtag_id
6  ORDER BY frequency DESC;
```

#festivesale

most followed hashtag

hashtag_name	hashtag_id	frequency
#festivesale	13	4
#studentlivesmatter	5	3
#enjoy	15	2
#like4like	26	2
#instagood	18	2
#love	17	2
#tbt	22	2
#followme	25	2
#family	12	2
#REOPEN colleges	7	1
#me	28	1
#runforunity	4	1
#fashion	21	1
#joinbtsarmy	1	1
#kisaansupport	2	1
#cute	24	1
#sunnyday	14	1
#christmas	10	1

Key Findings

Key findings include:
1. #beautiful is the most used hashtag, closely followed by #festival and #socialmedia
2. Arthur & Logan are the most followed users, with Omicron just 1 follower behind.
3. Brodie is the most active user and is 6 followers short of being the top followed user.
4. Most posts originate from Maharashtra .
5. Top 5 posts are bookmarked 5 times each.
6. Jacob made the most comments
7. Sanjay, Calum, and Charlie have the highest post-to-like ratio with 21 likes per post (but only one post each)
8. Sahib Singh uses the most diverse hashtags.
9. #festivesale is the most followed hashtag.

Recommendations

1. Leverage popular hashtags (#beautiful, #festival, #socialmedia) for increased visibility .
2. Engage top influencers (Arthur, Logan, Omicron) as brand ambassadors .
3. Highlight and incentivize active users like Brodie .
4. Develop targeted content strategies for high-activity regions, especially Maharashtra.
5. Analyze and replicate success factors of highly bookmarked posts.
6. Encourage active commenting through user spotlights.
7. Study high-engagement posts to understand and replicate success.
8. Promote diverse hashtag usage for broader reach.
9. Create campaigns around top followed hashtags like #festivesale.
10. Balance top influencer promotion with nurturing emerging active users.

Thank you!!!

—Amanat Mahmud