Instagram User Analytics

Project Description :

We are required to do data analysis on a dataset of Instagram users. The dataset consists of user detail such as username, user photo, likes and comments gained on photos, and tags added to any particular photo also having photo tags.
We will be answering two main goals i.e., helping the marketing team run campaigns and also giving the investors a detailed report on the performance of Instagram's digital Platform.

Approach :

Instagram user analytics is the project to analyze how users engage and interact with digital platforms using the dataset provided. Analyzing the dataset with the help of SQL software.
Using SQL to perform entire dataset analysis to find the answer to which questions are asked.

- *QUESTIONS :*

A) Marketing:
The marketing team wants to launch some campaigns, and they need
your help with the following
1. Rewarding Most Loyal Users: People who have been using the platform for the longest time.
Your Task: Find the 5 oldest users of the Instagram from the database provided

Answer:

```
select id, username, created_at
from users
order by created_at ASC
LIMIT 5;
```

2. Remind Inactive Users to Start Posting: By sending them promotional emails to post their 1st photo.
Your Task: Find the users who have never posted a single photo on Instagram

Answer:

```
select username from users
left join photos on users.id=photos.user_id
where photos.id is null;
```

3. Declaring Contest Winner: The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner.
Your Task: Identify the winner of the contest and provide their details to the Team

Answer:

```
select users.username, photos.id,photos.image_url,count(*) as total_likes

from likes join photos on photos.id=likes.photo_id
join users on users.id=likes.photo_id
group by photos.id
order by total_likes desc
limit 1
```

4. Hashtag Researching: A partner brand wants to know which hashtags to use in the post to reach the most people on the platform.
Your Task: Identify and suggest the top 5 most commonly used hashtags on the Platform

Answer:

```
SELECT tag_name, COUNT(tag_name) AS total
FROM tags
JOIN photo_tags ON tags.id = photo_tags.tag_id
GROUP BY tags.id
ORDER BY total DESC LIMIT 5;
```

5. *Launch AD Campaign:* The team wants to know, which day would be the best day to launch ADs.
Your Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

Answer:

```
SELECT date_format(created_at,'%W') AS 'Week Day', COUNT(*) AS 'Number of Registration '
```

FROM users GROUP BY 1 ORDER BY 2 DESC;

B) Investor Metrics: Our investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds
1. User Engagement: Are users still as active and post on Instagram or they are making fewer posts
Your Task: Provide how many times an average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

Answer:

SELECT ROUND((SELECT COUNT(*)FROM photos)/(SELECT COUNT(*) FROM users),2);

Bots & Fake Accounts: The investors want to know if the platform is crowded with fake and dummy accounts
Your Task: Provide data on users (bots) who have liked every single photo on the site (since any normal user would not be able to do this)

Answer:

SELECT users.id,username, COUNT(users.id) As total_likes_by_user FROM users

JOIN likes ON users.id = likes.user_id GROUP BY users.id

HAVING total_likes_by_user = (SELECT COUNT(*) FROM photos);