INSTAGRAM USER ANALYTICS

PROJECT DESCRIPTION:

This project is about analysing user behaviour on the Instagram platform and providing insights to the product and management teams to improve the user experience, launch successful marketing campaigns, and assess the platform's performance. The analysis will involve querying the provided database to find information such as the oldest users, inactive users, contest winners, commonly used hashtags, and user engagement metrics.

APPROACH:

1. Understanding the database schema and data

2. Identifying the relevant data to answer the questions posed by the product and management teams

3. Writing SQL queries to extract the relevant data

4. Cleaning and analyzing the data using statistical and visualization tools

5. Providing insights and recommendations based on the analysis.

TECH USED:

DBeaver is tool I used to run the SQL queries, user-friendly interface.

INSIGHTS:

1. Finding the oldest users of Instagram can help in rewarding the most loyal users and improve brand loyalty.

2. Identifying users who have never posted on Instagram can help in reminding them to start posting and increase user engagement.

3. Identifying the winner of a contest based on the most likes can help in declaring the winner and increasing brand engagement.

4. Identifying the top 5 most commonly used hashtags can help in improving brand visibility and reach on Instagram.

5. Knowing the day of the week with the most user registrations can help in scheduling an ad campaign for better user engagement and reach.

6. Calculating the average number of posts per user can help in assessing user engagement and activity on the platform.

7. Identifying and analyzing the data on bots and fake accounts can help in identifying potential issues and improving the platform's credibility.

RESULTS:

I have demonstrated the capability to provide insights and information based on a given database schema. This can be helpful for businesses or individuals looking to analyse their data and derive insights to inform decision-making. Overall, my contribution to this project has been to showcase the power of SQL queries for data analysis.

SQL QUERIES:

1. Find the 5 oldest users of the Instagram from the database provided

```
SELECT username, created_at
FROM users
ORDER BY created_at ASC
LIMIT 5;
```

2. Find the users who have never posted a single photo on Instagram

```
SELECT users.id, users.username
FROM users
LEFT JOIN photos ON users.id = photos.user_id
WHERE photos.user_id IS NULL;
```

3. Identify the winner of the contest and provide their details to the team

```
SELECT photos.id AS photo_id, users.username
FROM photos
LEFT JOIN users ON photos.user_id = users.id
WHERE photos.id = (
SELECT likes.photo_id
FROM likes
GROUP BY likes.photo_id
ORDER BY COUNT(likes.user_id) DESC
LIMIT 1
);
```

4. Your Task: Identify and suggest the top 5 most commonly used hashtags on the platform

```
SELECT tags.tag_name, COUNT(*) AS tag_count
FROM tags
GROUP BY tags.tag_name
ORDER BY tag_count DESC
LIMIT 5;
```

5. Your Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

```
SELECT DAYNAME('created_at') AS day_of_week, COUNT(*) AS num_users
FROM users
GROUP BY DAYNAME('created_at')
ORDER BY num_users DESC
LIMIT 1;
```

6. Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

```
SELECT COUNT(*) AS total_photos, COUNT(DISTINCT user_id) AS total_users,
COUNT(*) / COUNT(DISTINCT user_id) AS photos_per_user
FROM photos;
```

7. 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).

```
SELECT user_id
FROM likes
GROUP BY user_id
HAVING COUNT(DISTINCT photo_id) = (SELECT COUNT(*) FROM photos);
```

All these queries has been executed successfully and has got the valid output!!!