Instagram User Analytics

Assignment:02

SQL Fundamentals

Description:

Imagine you're a data analyst working with the product team at Instagram. Your role involves analyzing user interactions and engagement with the Instagram app to provide valuable insights that can help the business grow.

User analysis involves tracking how users engage with a digital product, such as a software application or a mobile app. The insights derived from this analysis can be used by various teams within the business. For example, the marketing team might use these insights to launch a new campaign, the product team might use them to decide on new features to build, and the development team might use them to improve the overall user experience.

In this project, you'll be using SQL and MySQL Workbench as your tool to analyze Instagram user data and answer questions posed by the management team. Your insights will help the product manager and the rest of the team make informed decisions about the future direction of the Instagram app.

Remember, the goal of this project is to use your SQL skills to extract meaningful insights from the data. Your findings could potentially influence the future development of one of the world's most popular social media platforms.

SQL Tasks:

A) Marketing Analysis:

1. **Loyal User Reward:** The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.
   Your Task: Identify the five oldest users on Instagram from the provided database.

   Query:

Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails.
Your Task: Identify users who have never posted a single photo on Instagram.

Query:

```
60
61 •    select user_id from photos
62      where image_url is null;
```

user_id

Contest Winner Declaration: The team has organized a contest where the user with the most likes on a singlePhoto wins.
Your Task: Determine the winner of the contest and provide their details to the team.

Query:

```
62      where image_url is null;
63
64 •    select user_id,count(photo_id) as pics_count from likes
65      group by user_id order by pics_count desc;
```

user_id	pics_count
21	257
71	257
5	257
66	257
41	257
14	257
57	257
24	257

Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.
Your Task: Identify and suggest the top five most commonly used hashtags on the platform.

Query:

```
66
67 •    select *,count(tag_name) from tags
68      group by tag_name order by count(tag_name)  desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conten

id	tag_name	created_at	count(tag_name)
20	beach	2024-06-15 19:02:49	1
8	beauty	2024-06-15 19:02:49	1
18	concert	2024-06-15 19:02:49	1
7	delicious	2024-06-15 19:02:49	1
10	dreamy	2024-06-15 19:02:49	1

Ad Campaign Launch: The team wants to know the best day of the week to launch ads.
Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.

Query:

```
68      group by tag_name order by count(tag_r
69
70 •    select created_at from users
71      group by created_at ;
```

Result Grid | Filter Rows: | Export:

created_at
2017-02-16 18:22:11
2017-04-02 17:11:21
2017-02-21 11:12:33
2016-08-13 01:28:43
2016-12-07 01:04:39

B) Investor Metrics:

<u>User Engagement:</u> Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.
Your Task: Calculate the average number of posts per user on Instagram.
Also, provide the total number of photos on Instagram divided by the total number of users.

<u>Query:</u>

```
72
73 •    select count(id)/count(user_id) as average from photos
74      group by created_dat;
75
```

	average
▶	1.0000

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

```
72
73 •    select count(user_id)/count(image_url) as average from photos
74      ;
75
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	average
▶	1.0000