Instagram User Analytics

Project Description:

User analysis is the process by which we track how users engage and interact with our digital product (software or mobile application) in an attempt to derive business insights for marketing, product & development teams.

These insights are then used by teams across the business to launch a new marketing campaign, decide on features to build for an app, track the success of the app by measuring user engagement and improve the experience altogether while helping the business grow. You are working with the product team of Instagram and the product manager has asked you to provide insights on the questions asked by the management team.

Approach:

I loaded the dataset provided into new schema, studied it to know about the dataset then done analysis on it using SQL queries.

Tech-Stack Used:

I used online SQL Playground - DB Fiddle

Insights:

I executed the different Queries as per the given tasks and provided a detailed report. The Queries that I executed using given data and the detailed report that I filtered out is given below.

Result:

A. Marketing:

1. Rewarding Most Loyal Users: Find the 5 oldest users of the Instagram from the database provided.

Query SQL:

```
1 select * from ig_clone.users
2 order by created_at
3 limit 5
```

Result:

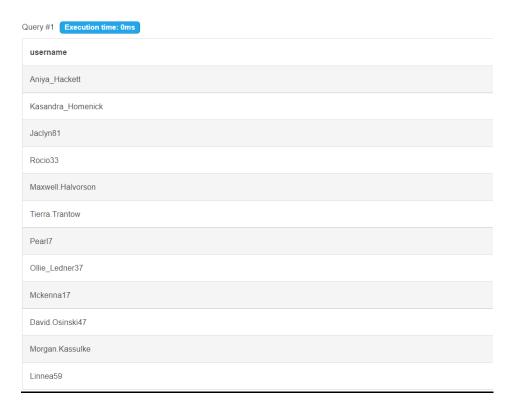
id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:30
63	Elenor88	2016-05-08 01:30:41
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:26

2. Remind Inactive Users to Start Posting: Find the users who have never posted a single photo on Instagram

Query SQL:

```
1 Select u.username
2 from
3 ig_clone.users u
4 left join
5 ig_clone.photos p
6 on u.id=p.user_id
7 where p.user_id is null
```

Result:





3. Declaring Contest Winner: Identify the winner of the contest and provide their details to the team

Query SQL:

```
1 select u.username,count(*) as total_likes from ig_clone.likes l
2 join ig_clone.photos p on p.id=l.photo_id
3 join ig_clone.users u on u.id=l.photo_id
4 group by p.id
5 order by total_likes desc
6 limit 1;
```

Result:

Query #1 Execution time: 4ms

username	total_likes
Zack_Kemmer93	41

4. Hashtag Researching: Identify and suggest the top 5 most commonly used hashtags on the platform

Query SQL:

```
1 select t.tag_name,count(p.photo_id) as no_of_times_used from ig_clone.photo_tags p
2 inner join ig_clone.tags t on p.tag_id= t.id
3 group by tag_name
4 order by no_of_times_used desc
5 limit 5;
```

Result:

tag_name	no_of_times_used
smile	59
beach	42
party	39
fun	38
food	24

5. **Launch AD Campaign:** What day of the week do most users register on? Provide insights on when to schedule an ad campaign

Query SQL:

```
1 select dayname(u.created_at) as day,count(*) as total_reg
2 from ig_clone.users u
3 group by day
4 order by total_reg desc
5 limit 3
```

Result:

day	total_reg
Sunday	16
Thursday	16
Friday	15

B. Investor Metrics:

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

Query SQL:

```
1 with CTE as (select u.id as userid,count(p.id) as photoid
2 from ig_clone.users u
3 left join ig_clone.photos p on u.id = p.user_id group by u.id)
4 select sum(photoid) as total_photos,
5 count(userid) as total_users,
6 sum(photoid)/count(userid) as photos_per_users from CTE
```

Result:

total_photos	total_users	photos_per_users
257	100	2.5700

2. Bots & Fake Accounts: 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).

Query SQL:

```
1 select u.username, l.user_id, count(*) as total_likes
2 from ig_clone.users u, ig_clone.likes l
3 where u.id=l.user_id
4 group by user_id
5 order by total_likes desc;
```

Result:

username	user_id	total_likes
Leslie67	75	257
Rocio33	21	257
Maxwell.Halvorson	24	257
Bethany20	91	257
Ollie_Ledner37	36	257
Mckenna17	41	257
Jaclyn81	14	257
Janelle Nikolaus81	76	257
Duane60	54	257
Julien_Schmidt	57	257
Mike Auer39	66	257
Aniya_Hackett	5	257
Nia_Haag	71	257