INSTAGRAM USER ANALYTICS

BY CH.KRISHNA SAI

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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

- The project, "Instagram User Analytics," aims to analyze user engagement and interaction with digital platforms using a provided dataset. SQL software will be utilized to perform a comprehensive analysis of the dataset, addressing various questions related to user behavior and interactions.

TECH STACK USED

- The software used for this project is MySQL Workbench 8.0 CE, Version 8.0.31 build 2235049 CE (64-bit).
- MySQL is employed for its relational database management capabilities based on SQL (Structured Query Language). A relational database organizes data into separate tables instead of storing all data in a single, large repository, with its structure optimized for speed through organized physical files.

INSIGHTS

- **Rewarding Most Loyal Users:** People who have been using the platform for the longest time.
- Task: Finding the 5 oldest users of the Instagram from the database provided
- Command:
- select username,created_at from users order by created_at limit 5;

```
76
77    -- 1.Find 5 oldest customers in instagram from above database
78
79    select * from users;
80
81    select username,created_at from users order by created_at limit 5;
82
83    -- 2.Find users who never posted single photo on instagram
84
85    select * from photos,users;
86
87    select u.username from users u left join photos p on p.user_id=u.id where p.image_ur
```

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

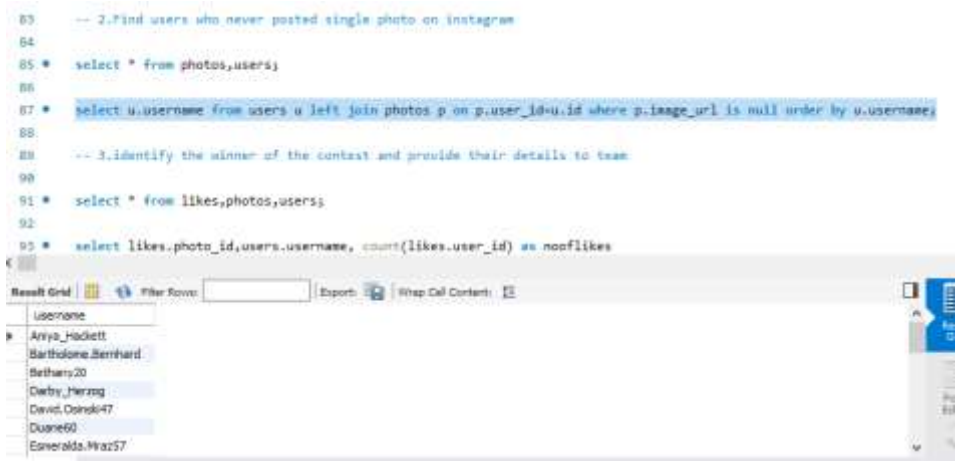
username	created_at
Darby_Herzog	2016-05-06 00:14:21
Emilio_Bernier52	2016-05-06 13:04:30
Elenor88	2016-05-08 01:30:41
Nicole71	2016-05-09 17:30:22
Jordyn.Jacobson2	2016-05-14 07:56:26

Task: Finding the users who have never posted a single photo on Instagram

Command:

Select * from users,photos;

select u.username from users u left join photos p on p.user_id=u.id where p.image_url is null order by u.username;



DECLARING CONTEST WINNER:

Task :Identifying the winner of the contest and providing their details to the team.

Command:

select * from likes,photos,users;

select likes.photo_id,users.username, count(likes.user_id) as nooflikesfrom likes inner join photos on likes.photo_id=photos.idinner join users on photos.user_id=users.id group bylikes.photo_id,users.username order by nooflikes desc;

```
89    -- 3.identify the winner of the contest and provide their details to team
90
91    select * from likes,photos,users;
92
93    select likes.photo_id,users.username, count(likes.user_id) as nooflikes
94    from likes inner join photos on likes.photo_id=photos.id
95    inner join users on photos.user_id=users.id group by
96    likes.photo_id,users.username order by nooflikes desc ;
97
98
99    -- 4. Identify and suggest the most common used hastags in instagram
```

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

photo_id	username	nooflikes
145	Zack_Kemmer93	48
127	Malinda_Streich	43
182	Adelle96	43
123	Seth46	42
30	Presley_McClure	41
52	Annalise.McKenzie16	41
61	Delpha.Kihn	41

HASHTAG RESEARCHING

Task: To identify the top 5 most commonly used hashtags on instagram.

Command:

select * from photo_tags,tags;

select t.tag_name,count(p.photo_id) as ht from photo_tags p inner join tags t on t.id=p.tag_id group by t.tag_name order by ht desc;

```
99    -- 4. Identify and suggest the most common used hastags in instagram
100   select * from photo_tags,tags;
101
102   select t.tag_name,count(p.photo_id) as ht from photo_tags p inner join
103
104   -- 5. what day of the week users most registered on instagram? provide
105
106   select * from users;
107
108   select DATE_FORMAT((created_at), '%W') as dayy,count(username) from use
```

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

tag_name	ht
smile	59
beach	42
party	39
fun	38
concert	24
food	24
lol	24

LAUNCH AD CAMPAIGN:

TASK: To find out the day of week when most users register's on Instagram

Command:

select * from users;

select DATE_FORMAT((created_at), '%W') as dayy,count(username) from users group by 1 order by 2 desc;

```
104    -- 5. what day of the week users most registered on instagram? provide insights on when to create an ad campaign?
105
106 •  select * from users;
107
108 •  select DATE_FORMAT((created_at), '%W') as dayy,count(username) from users group by 1 order by 2 desc;
109
110    -- 6.Provide the average number of posts per user on Instagram. Also, provide the total number of photos on Instagr
111
112 •  select * from photos,users;
113 •  with base as(
114    select u.id as userid,count(p.id) as photoid from users u left join photos p on p.user_id=u.id group by u.id)
```

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

dayy	count(username)
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

INVESTOR METRICS

Investors want to know if Instagram Is performing well and is not becoming redundant like Facebook, They want to assess the app on following grounds…

USER ENGAGEMENT:

Task: Provide how many times the average user posts on Instagram, Also provide total number of photos on Instagram / total posts

Command:

```
select * from photos,users;

with base as(

select u.id as userid,count(p.id) as photoid from users u left join photos p on p.user_id=u.id group by u.id)

select sum(photoid) as totalphotos,count(userid) as total_users,sum(photoid)/count(userid) as photoperuser

from base;
```

BOTS & FAKE ACCOUNTS

Task: To Provide data on users(bots) who have liked every single photo on the site(normal user would not be able to do this)

Command:

```
select * from users,likes;

with base as(

select u.username,count(l.photo_id) as likess from likes l inner join users u on u.id=l.user_id

group by u.username)

select username,likess from base where likess=(select count(*) from photos) order by username;
```

RESULT:

- During this project, I learned many important MySQL terms that aid in solving complex problems, regardless of the database size. I gained valuable experience in using SQL and navigating MySQL Workbench, which I believe will be very beneficial in the future. I have provided solutions to all the questions asked and believe they are correct to the best of my knowledge, effectively addressing all the queries

THANK YOU