

## Instagram User Analytics

### **PROJECT DESCRIPTION:**

This Instagram user analytics project is about finding out the various insights in Instagram User database.

I analyze this data and some following questions:

- 1) Find the 5 oldest users of the Instagram from the database provided
- 2) Find the users who have never posted a single photo on Instagram
- 3) Identify the winner of the contest and provide their details to the team
- 4) Identify and suggest the top 5 most commonly used hashtags on the platform
- 5) What day of the week do most users register on? Provide insights on when to schedule an ad campaign.
- 6) Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users
- 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).

### APPROACH:

First I analyzed the database completely after analyzing I got clear understanding about the database and all the tables, rows, columns, and relationship among all the table of database. Then I started creating tables in MYSQL After finishing creating table, I have added the data in each table After that I check all the tables content . Then one by one I have executed queries according to the questions asked in Instagram user analytics.

### Tech Stack used:

I used MYSQL software for this project, I create all the tables and run all queries which is asked in project.  
MYSQL is easy to use and cost free software.

### INSIGHTS:

I have learned about SQL functions like limit, order by, joins, count, Group by, having these are the function which is helped me to solved the questions asked in this project.

### RESULTS:

Honestly speaking through this project I got good exposure of SQL  
Means now I know how to use MYSQL , how to create tables in database and how they are related to each other . i learned how to Manage data in database

**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

Query which I used for this task:

```
select * from users order by created _at limit 0,5;
```

**Output:**

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: By sending them promotional emails to post their 1st photo.

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

Query which I used for this task:

```
SELECT u.* FROM users u left JOIN photos p on u.id = p.user_id WHERE  
p.user_id is null;
```

Output is in next page



id	username
5	Aniya_Hackett
7	Kasandra_Homenick
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
25	Tierra.Trantow
34	Pearl7
36	Ollie_Ledner37
41	Mckenna17
45	David.Osinski47
49	Morgan.Kassulke
53	Linnea59
...	...
...	...
89	Jessyca_West
90	Esmeralda.Mraz57
91	Bethany20

**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

Query which I used for this task:

```
SELECT users.username, photo_id, COUNT(*) AS Most_liked FROM likes INNER JOIN  
users ON users.id=likes.user_id GROUP BY photo_id order by most_liked desc limit  
1;
```

Output:

username	Photo_id	Most_liked
Harley_Lind18	145	48

**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

Query which I used for this task:

```
select t.tag_name FROM tags t JOIN photo_tags pt ON pt.tag_id = t.id  
GROUP BY t.tag_name limit 0,5;
```

Output:

Tag_name
beach
beauty
concert
delicious
dreamy



**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

Query which I used for this task:

```
SELECT DAYNAME(created_at) as Day FROM users GROUP BY  
DAYNAME(created_at)order by count(DAYNAME(created_at)) desc limit  
1;
```

Output:

Day
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Thursday
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**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 does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

Query which I used for this task:

```
SELECT COUNT(*) / COUNT(DISTINCT(p.user_id)) AS  
AvgPostsPerUsers,COUNT(p.image_url) AS TotalNumOfPosts FROM photos  
p;
```

Output:

AvgPostsPerUsers	TotalNumOfPosts
3.4730	257

**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).

Query which I used for this task:

```
SELECT user_id AS FakeAccountID FROM likes GROUP BY user_id HAVING  
COUNT(user_id)=(SELECT COUNT(image_url) FROM photos);
```

Output is in next page

FakeAccountId
5
14
21
24
36
41
54
57
66
71
75
76
91