**Instagram User Analytics**

**Project Description** – Here, is the project on Instagram user analytics. As we know Instagram a popular social site. that we use mostly in our daily basis eager for checking likes, increasing follower, posting pictures, stalking (just joking) etc. In this project we have done deep analysis on the Dataframe provided using the SQL Language. I have used online compiler db-fiddle.com for solving the problems.

**In this project we are going to :-**

* Find the 5 oldest users of the Instagram from the database provided.
* Find the users who have never posted a single photo on Instagram.
* Identify the winner of the contest and provide their details to the team.
* Identify and suggest the top 5 most commonly used hashtags on the platform.
* What day of the week do most users register on? Provide insights on when to schedule an ad campaign.
* Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users.
* 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 –** For solving the provided questions. I have first uploaded the data in the compiler and planned the solutions step by step of solving it. I always Run my code in between to test the code and I make sure to save the Code. I have also taken help from the provided solutions to get the best approach of solving the questions.

**Tech-Stack Used –** At the Beginning of my project I started solving it via. MySql. workbench 8.0 CE. It was good and fast. But it is very difficult to use and also Confusing. While we re run it again again our previous code tends to gets executed with the previous one. Hence, Sometimes it becomes irritating. So, I started using online compiler as provided in the Solution. It is simple and easy to Execute.

**Insights** – While solving the questions. I got deep understanding and starts developing, getting the best approaches of solving the Questions. At starting it was little bit Confusing.

**For Example** – interrelating the ‘id’ in users to the ‘user\_id’ in likes and ‘photo\_id’ in the photos.

While Solving my Doubt gets Fading. At the Beginning, Solutions I’m getting is sometimes not getting Executed, Even getting Error. But by getting used to it. We can find the best Approach of Solving it. Best part of solving it is getting deep insights and making Conclusions.

**For Example** – The Best days to Launch the Ads, When the users Are more Active, how to promote the ads etc.

For Promoting or Launching the Ads, we can launch in day. when mostly the users are Active. Even make the paid partnerships with the most Active users with most follower and likes etc.

**Results -**

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

**Code :-**

**SELECT username FROM ig\_clone.users ORDER BY created\_at LIMIT 5;**

1. **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

**Code :-**

**SELECT username FROM ig\_clone.users as u**

**LEFT JOIN ig\_clone.photos as p ON**

**u.id = p.user\_id**

**WHERE p.user\_id IS NULL LIMIT 5;**

1. **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

**Code:-**

**SELECT u.username,likes.photo\_id,count(likes.user\_id) as total\_likes FROM ig\_clone.likes as likes**

**INNER JOIN ig\_clone.photos as p**

**ON likes.photo\_id = p.user\_id**

**INNER JOIN ig\_clone.users as u**

**ON u.id=p.user\_id**

**GROUP BY likes.photo\_id, u.username**

**ORDER BY total\_likes DESC LIMIT 5;**

1. **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

**Code :-**

**SELECT count(pt.photo\_id) as photo\_tagged,tags.tag\_name**

**FROM ig\_clone.photo\_tags pt**

**INNER JOIN ig\_clone.tags tags**

**ON pt.tag\_id = tags.id**

**GROUP BY tags.tag\_name**

**ORDER BY photo\_tagged DESC**

**LIMIT 5;**

1. **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

**Code:-**

**SELECT WEEKDAY(created\_at) as Week\_day ,count(\*) as Days**

**FROM ig\_clone.users**

**GROUP BY Week\_day ORDER BY Days DESC;**

Here, the Output we will get will be in the range of 0-7.

when 1 then 'Sunday'

when 2 then 'Monday'

when 3 then 'Tuesday'

when 4 then 'Wednesday'

when 5 then 'Thursday'

when 6 then 'Friday'

when 7 then 'Saturday

**PART – 2**

**INVESTOR METRICS**

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

**CODE –**

**WITH DATA AS (**

**SELECT u.id as userID,count(p.id) as photo\_posted FROM**

**ig\_clone.users u**

**LEFT JOIN ig\_clone.photos p**

**ON u.id=p.user\_id**

**GROUP BY u.id;**

**)**

**This provides the average user posts on Instagram –**

**SELECT sum(photo\_posted)/count(userID) AS post\_per\_user**

**FROM DATA WHERE photo\_id>0;**

1. **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).

**CODE –**

**SELECT user\_id ,COUNT(photo\_id) AS num\_like**

**FROM ig\_clone.likes**

**GROUP BY user\_id**

**HAVING num\_like = (SELECT COUNT(\*) FROM ig\_clone.photos)**

This will provide the user\_id of the users who has liked all the photos present in the site.

----------------------------------------------------------------------------------------------------------------