INSTAGRAM USER ANALYTICS

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Project Description :

The project is about finding the insights needed for the marketing team and the investors about the Instagram to make data-driven-decision.

The tools used to answer the question asked by the marketing team and the investors is MySQL.

In the following report we can find the answers to the questions asked by the marketing team and the investors.

Approach :

First the dataset have been loaded in MySQL database then the database have been thoroughly studied to understand the attributes then used multiple queries to find out the answers for the questions asked by the marketing team and the investors.

Tech-Stack Used:

The software used to create the solution for this project is MySQL Workbench and the version of the software is 8.0.32.

It is most popular and easy way to access the MySQL Database.

I think it will be more efficient for this project.

Insights :

Marketing team's insights :

1.The 5 oldest users of the Instagram :

SQL query:

SELECT username FROM users ORDER BY created_at LIMIT 5;

OUTPUT:

Darby_Herzog

Emilio_Bernier52

Elenor88

Nicole71

Jordyn.Jacobson2

2. The users who have never posted a single photo on Instagram:

SQL query:

SELECT username FROM users WHERE id NOT IN (SELECT DISTINCT user_id FROM photos);

Output:

Aniya_Hackett

Kasandra_Homenick

Jaclyn81

Rocio33

Maxwell.Halvorson

Tierra.Trantow

Pearl7

Ollie_Ledner37

Mckenna17

David.Osinski47

Morgan.Kassulke

Linnea59

Duane60

Julien_Schmidt

Mike.Auer39

Franco_Keebler64

Nia_Haag

Hulda.Macejkovic

Leslie67

Janelle.Nikolaus81

Darby_Herzog

Esther.Zulauf61

Bartholome.Bernhard

Jessyca_West

Esmeralda.Mraz57

Bethany20

3.The user with most likes on a single photo on the contest :

SQL query:

SELECT username FROM users WHERE id = (SELECT user_id FROM photos WHERE id = (SELECT photo_id FROM likes GROUP BY photo_id ORDER BY count(*) DESC LIMIT 1));

Output:

Zack_Kemmer93

4. The top 5 most popular hashtags on the platform :

SQL query:
SELECT tag_name FROM tags JOIN
(SELECT tag_id FROM photo_tags GROUP BY tag_id ORDER BY count(*) DESC LIMIT 5)
AS popular_tags
ON id IN (tag_id);

Output:
smile

beach

party

fun

concert

5.Launch AD Campaign:

SQL query:

SELECT w_day FROM (SELECT WEEKDAY(created_at) AS w_day, count(*) as total

FROM users group by w_day) AS week_day

WHERE total = (SELECT max(total) FROM (SELECT WEEKDAY(created_at) AS w_day, count(*) as total

FROM users group by w_day) AS week_day_1);

Output:

3

6

NOTE:

0 = Monday, 1 = Tuesday, 2 = Wednesday, 3 = Thursday, 4 = Friday, 5 = Saturday, 6 = Sunday.

Therefore Best day to Launch AD Campaign would be either Thursday or Sunday.

Investor Metrics :

1.User Engagement :

There are totally 100 users on the Instagram out of which only 74 users have posted and they have posted collectively 257 posts(photos).

SQL query:

SELECT (SELECT count(*) FROM photos)/(SELECT count(*) FROM (SELECT DISTINCT user_id FROM photos) AS user_who_post) AS Average_user_post;

Output:

3.4730

So, the average user post on Instagram is 3.473.

Total number of photos on Instagram/Total number of users:

SQL query:

SELECT (SELECT count(*) FROM photos) / (SELECT count(*) FROM users) AS avg_photos_by_tot_users;

Output:

2.5700

Therefore, Total number of photos on Instagram/Total number of users = 2.57

2. Bots and Fake Accounts:

SQL query:

SELECT username FROM users WHERE id IN

(SELECT user_id FROM likes GROUP BY user_id HAVING count(*) = 257);

Output:

Aniya_Hackett

Jaclyn81

Rocio33

Maxwell.Halvorson

Ollie_Ledner37

Mckenna17

Duane60

Julien_Schmidt

Mike.Auer39

Nia_Haag

Leslie67

Janelle.Nikolaus81

Bethany20

Therefore, there are bots on the Instagram.

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Results:

The insights have helped the marketing team to reward 5 oldest users and to remind inactive users by sending them promotional email, declaring the winner for the contest , finding the top 5 popular hashtags in the platform, and to find out the day of the week to launch the AD Campaign.

The insights have helped investors to decide whether to invest in the platform or not.