

Instagram User Analytics

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Description:

The Instagram user analytics project aims to gather insights into behavior of users on Instagram by analyzing their activity on the platform. The project will involve creating a new database, inserting data into the database, and performing various analyses on the data to answer specific questions about user behavior.

Approach:

- 1. Define objectives and questions: The first step is to define the objectives of the project and the question that need to be answered. Some possible question might include:
 - What are the most popular hashtags used by Instagram users?
 - What is the average number of likes and comments received by a post?
 - What is the most common time of day for users to post on Instagram?
 - Which users have the most followers?
- 2. Gather.data:The next step is to gather data from Instagram. These are various methods for gathering data ,such as using Instagram's API,Web scraping.Depending on the scope of the project, it may be necessary to collect data over a period of time to get a representative sample.
- 3. Create a database:Once the data is collected,the next step is to create a new database to store the data. There are various types of databases that can be used for this project, such as SQL or NoSQL databases.
- 4. Insert data:After creating the database,the data can be inserted into it. It is essential to ensure that the data is cleaned and formatted correctly to avoid any errors or inconsistencies.
- 5. Perform analysis:Once the data is in the database, the next step is to perform various analyses to answer the questions defined earlier. These are various analytical tools and techniques that can be used, such as data visualization, statistical analysis, and machine learning algorithms.
- 6. Draw conclusions and present findings: After completing the analysis, the final step is to draw conclusions and present the findings. The conclusions should be based on the data and insights gained from the analysis. The findings can be presented in various formats, such as tables, charts, graphs, or reports.

Overall, the Instagram user analytics project is a comprehensive approach to analyzing user behavior on the platform, Which can help businesses and individuals optimize their Instagram strategies for maximum engagement and reach.

Tech-Stack Used:

MySQL Workbench 8.0 CE(Provides a visual console to easily adminster MySQL environments and gain better visibility into databases).

Insights:

Marketing:

- 1. Rewarding Most Loyal Users: People who have been using the platform for the longest time. Your Task: Find the 5 oldest users of Instagram from the database provided.
 - Query:select * from users order by created at limit 5;
- 2. Remind Inactive Users to Start Posting:By sending them promotional emails to post their 1st photo. Your Task: Find the users who never posted a single photo on Instagram
 - Query:select username from users left join photos on users.id=photos.user_id where photos.id is null;
- 3. Declaring Contest Winner:The team started a contest and the user who gets the most likes on a single post 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:select users.username, photos.id,photos.image_url,count(*) as total_likes from likes join photos on photos.id=likes.photo_id join users on users.id=likes.photo_id group by photos.id order by total_likes desc limit 1;
- 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 suggests the top 5 most commonly used hastags on the platform
 - Query:select tags.tag_name,COUNT(*) as total from photo_tags join tags on photo_tags.tag_id=tag_id group by tags.id order by total desc limit 5;

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:select dayname(created_at) as day, count(*) as total from users group by day order by total desc limit 5;

Investor Metrics:

 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.

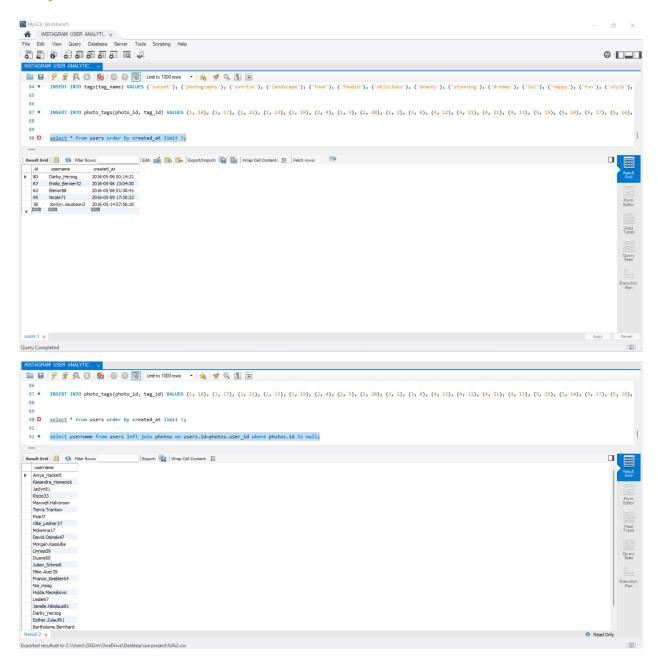
Query:select round((select count(*) from photos)/(select count(*) from users),2);

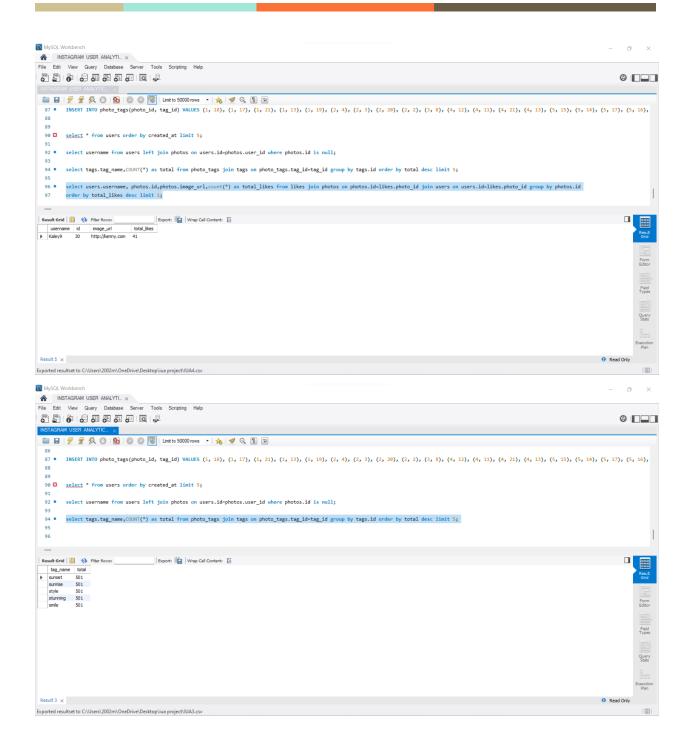
Query:select count(distinct(users.id)) as total_no from users join photos on users.id=photos.user_id;

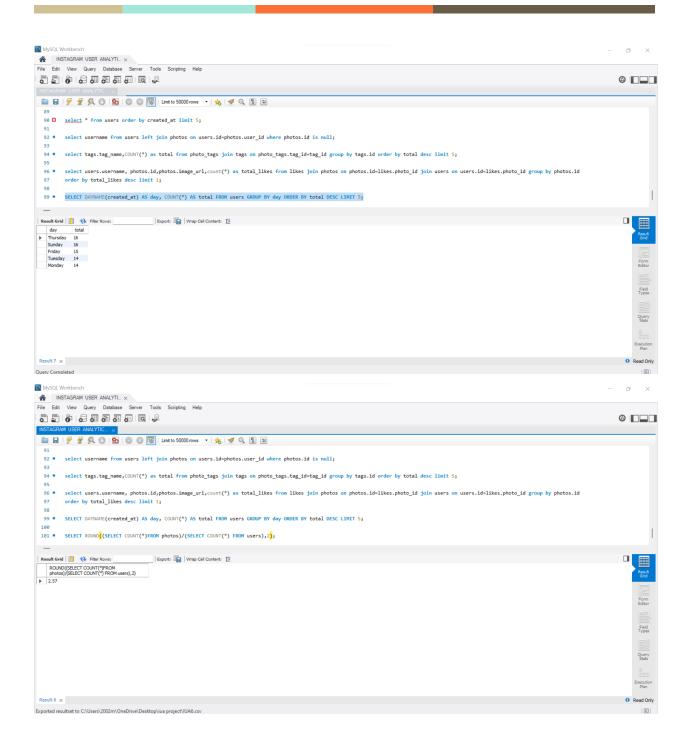
2. Bots & Fake Accounts: The investors want to know if the Platform is crowded with fake and dummy accounts. Your Task: Provide data on users (bots) who liked every single photo on the site (since any normal user would not be able to do this).

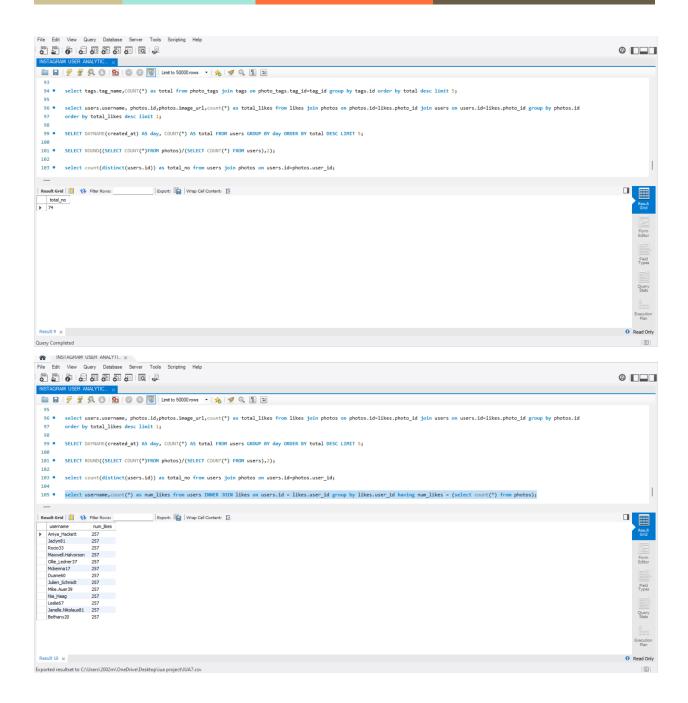
Query:select username,count(*) as num_likes from users INNER JOIN likes on users.id = likes.user_id group by likes.user_id having num_likes = (select count(*) from photos)

Outputs:









Drive link:

Please find the attachments for your reference

:link

Results:

The data collected from Instagram was analyzed and used to gain some insights into user behavior on the platform, including popular hashtags, average post engagement, opitimal posting times, and influential users. These insights can be used to improve Instagram strategies and increase engagement and reach.