INSTAGRAM USER ANALYTICS

By- Pratham Mehta

Project Description

This project aims to analyze user interactions and engagement on the Instagram app to generate valuable insights that can drive business growth. Using MySQL Workbench as the primary analysis tool, we will delve into Instagram user data to answer specific questions posed by the management team. By uncovering trends and patterns in user behavior, content performance, and engagement metrics, the project will provide the product manager and the broader team with data-driven insights. These insights will inform strategic decisions, guiding the future development and direction of the Instagram app to better meet user needs and enhance overall engagement.

Approach

The approach was to filter out the data with the help of different type of query commands like “joins” which include the concepts of primary key and foreign keys and using these concepts in inner-joins and left-joins and “group by” query commands were used to remover or count recursive datasets. With the help of these commands the data was much cleaner and easier to analyze and extract insights from it, making the work more efficient.

Tech Stack Used

The software used for this project is MYSQL Workbench 8.0 CE. MYSQL is one the best open-source software in the market in its field and it provides various query language controls like DDL, DML and DCL. Along with it, it is also beginner friendly and is most used and sought by beginners as there is a huge community of it and because of which if there are any problems or issues the community has a solution for it.

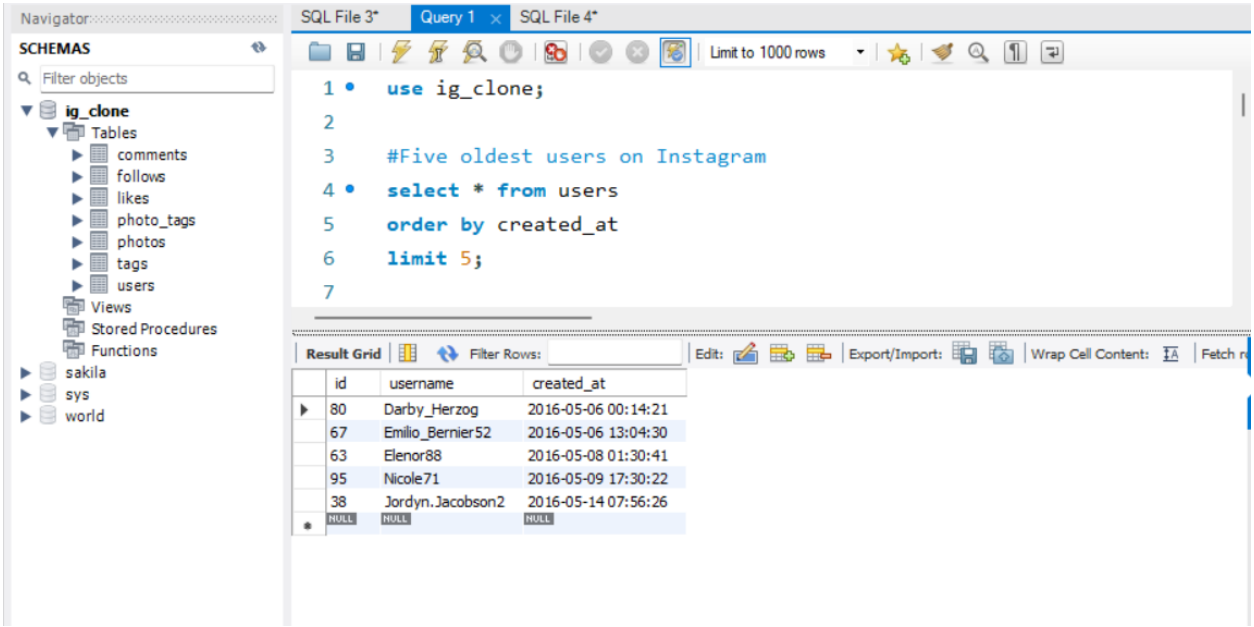
Insights

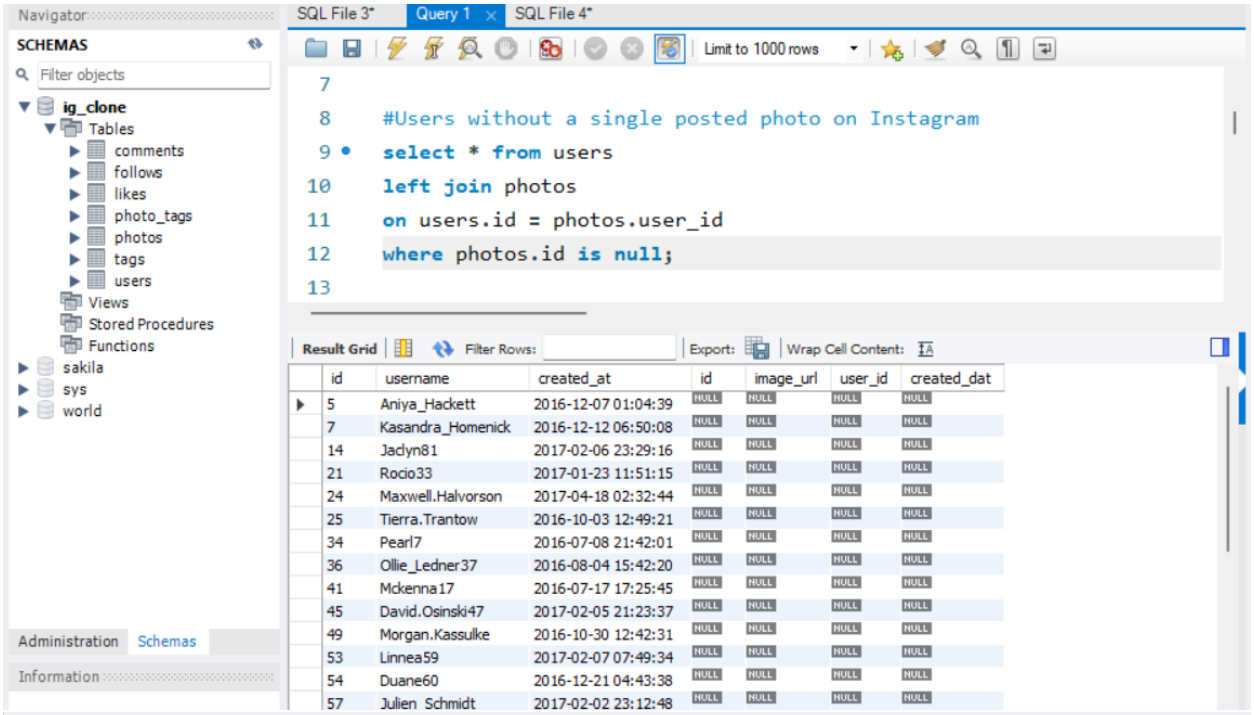
The data used helped us gain insight into the user activity and other activities on the platform.

1) **Loyal User Reward:** With the help of the data, we tracked our oldest customers who have been with us for a long time and for their loyalty we provided them with some rewards for their loyalty.

2) **Inactive User Engagement:** Identified users which are not active on the platform and sent them promotional mail regarding their engagement on the platform and promoting them to engage with the platform more.
3) **Contest Winner Declaration:** With the help of query commands, we could find out the user with most likes on single photo on Instagram. Which helped in finding the winner for the Contest. The winner is Zack_Kemmer93 with 48 likes.
4) **Hashtag Research:** During the hashtag research we came across 5 hashtags which are being used the most. Smile being the most used hashtag while the rest were beach, party, fun and concert.
5) **Ad Campaign Launch:** For an upcoming ad campaign, the most suitable days with most user engagement in joining of new users are Thursday and Sunday.
6) **User Engagement:** There are 2.57 no. of post of photos per user according to the data. Where the total no. of users is 100 and the total number of posts is 257.
7) **Potential Identification of Bots:** According to the data provided there were no bots as such suspected or identified.

Snapshots

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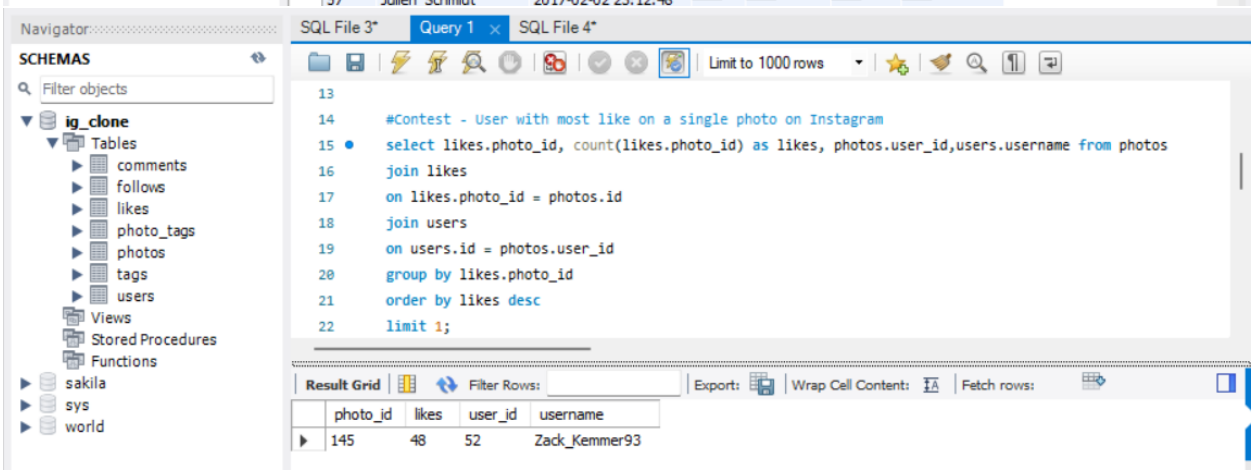
SQL File 3*
Query 1
SQL File 4*
Limit to 1000 rows
#Users without a single posted photo on Instagram
select * from users
left join photos
on users.id = photos.user_id
where photos.id is null;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
id username created_at id image_url user_id created_dat
5 Aniya_Hackett 2016-12-07 01:04:39
7 Kasandra_Homenick 2016-12-12 06:50:08
14 Jadyn81 2017-02-06 23:29:16
21 Rocio33 2017-01-23 11:51:15
24 Maxwell.Halvorson 2017-04-18 02:32:44
25 Tierra.Trantow 2016-10-03 12:49:21
34 Pearl7 2016-07-08 21:42:01
36 Ollie_Ledner37 2016-08-04 15:42:20
41 Mckenna17 2016-07-17 17:25:45
45 David.Osinski47 2017-02-05 21:23:37
49 Morgan.Kassulke 2016-10-30 12:42:31
53 Linnea59 2017-02-07 07:49:34
54 Duane60 2016-12-21 04:43:38
57 Julien_Schmidt 2017-02-02 23:12:48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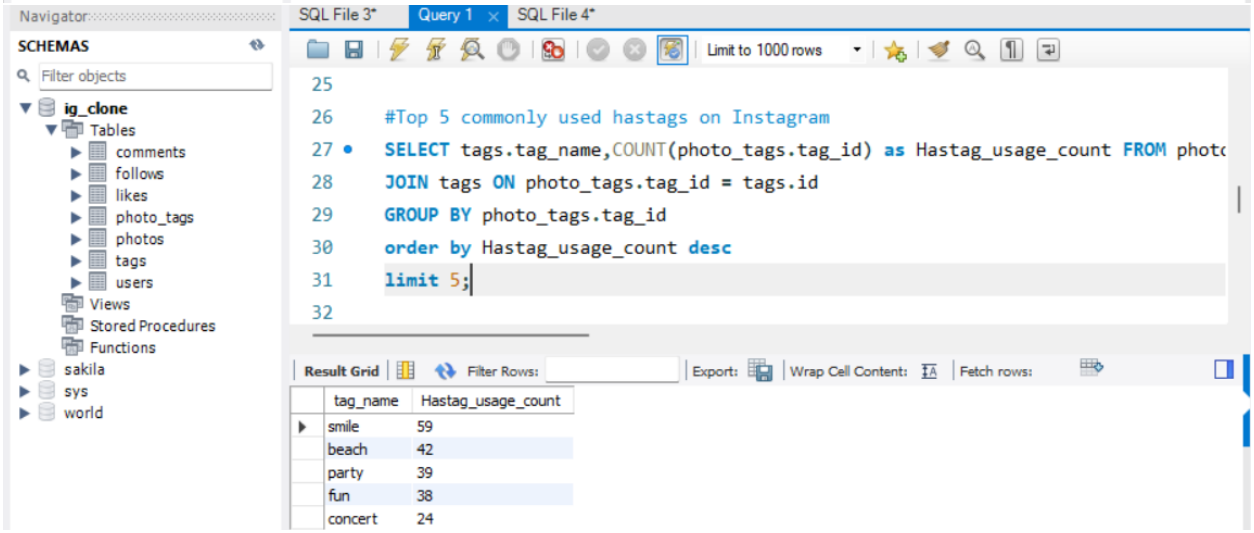
SQL File 3*
Query 1
SQL File 4*
Limit to 1000 rows
#Contest - User with most like on a single photo on Instagram
select likes.photo_id, count(likes.photo_id) as likes, photos.user_id,users.username from photos
join likes
on likes.photo_id = photos.id
join users
on users.id = photos.user_id
group by likes.photo_id
order by likes desc
limit 1;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Fetch rows:
photo_id likes user_id username
145 48 52 Zack_Kemmer93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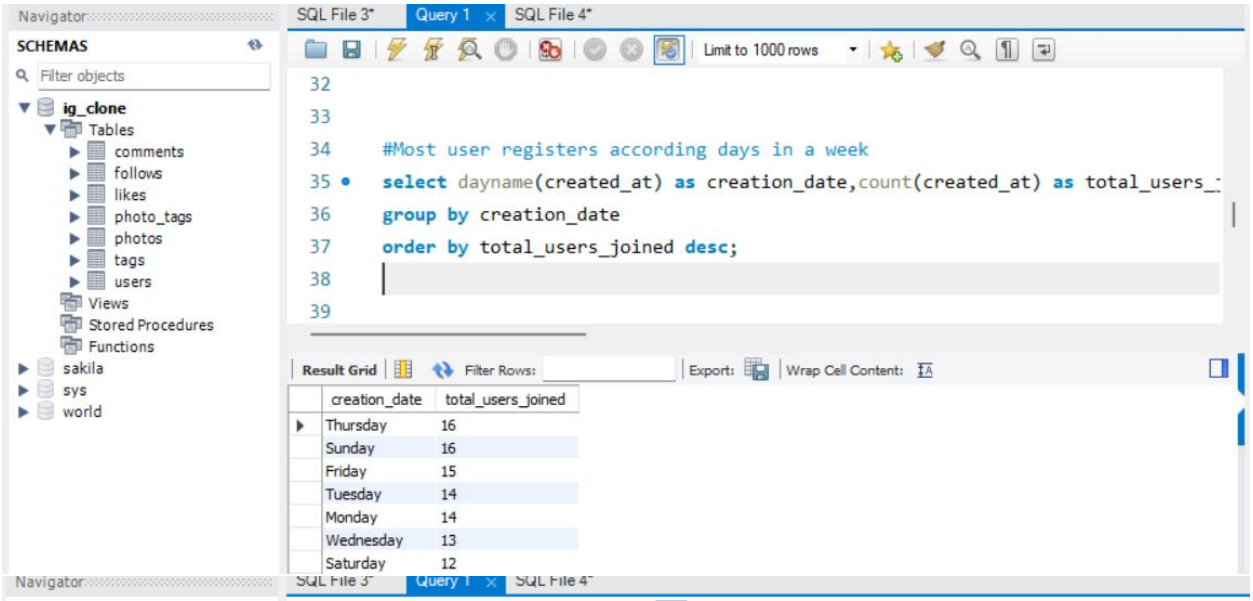
SQL File 3*
Query 1
SQL File 4*
Limit to 1000 rows
#Top 5 commonly used hastags on Instagram
SELECT tags.tag_name,COUNT(photo_tags.tag_id) as Hastag_usage_count FROM photo
JOIN tags ON photo_tags.tag_id = tags.id
GROUP BY photo_tags.tag_id
order by Hastag_usage_count desc
limit 5;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Fetch rows:
tag_name Hastag_usage_count
smile 59
beach 42
party 39
fun 38
concert 24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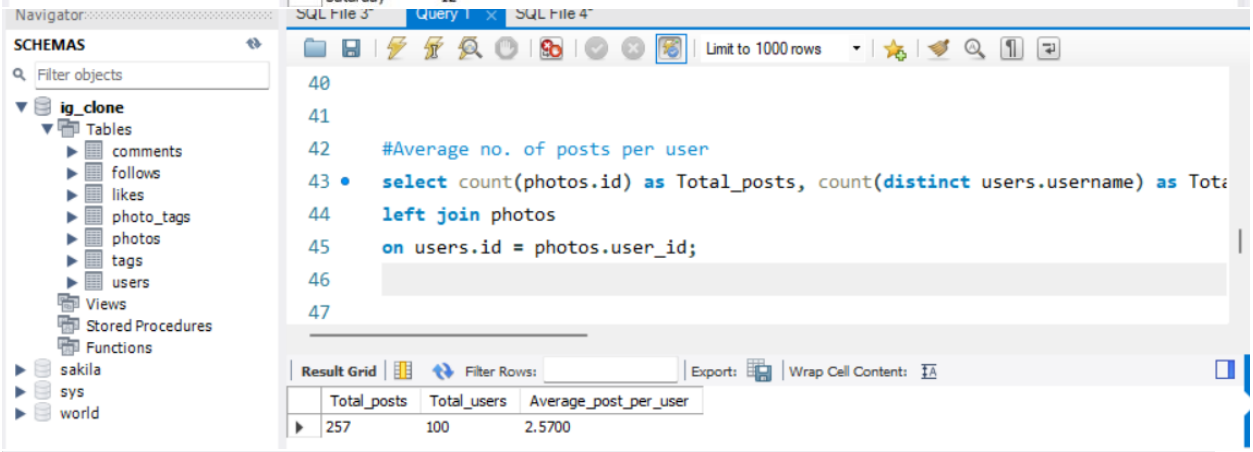
world
SQL File 3*
Query 1
SQL File 4*
Limit to 1000 rows
32
33
34 #Most user registers according days in a week
35 select dayname(created_at) as creation_date,count(created_at) as total_users_
36 group by creation_date
37 order by total_users_joined desc;
38
39
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
creation_date total_users_joined
Thursday 16
Sunday 16
Friday 15
Tuesday 14
Monday 14
Wednesday 13
Saturday 12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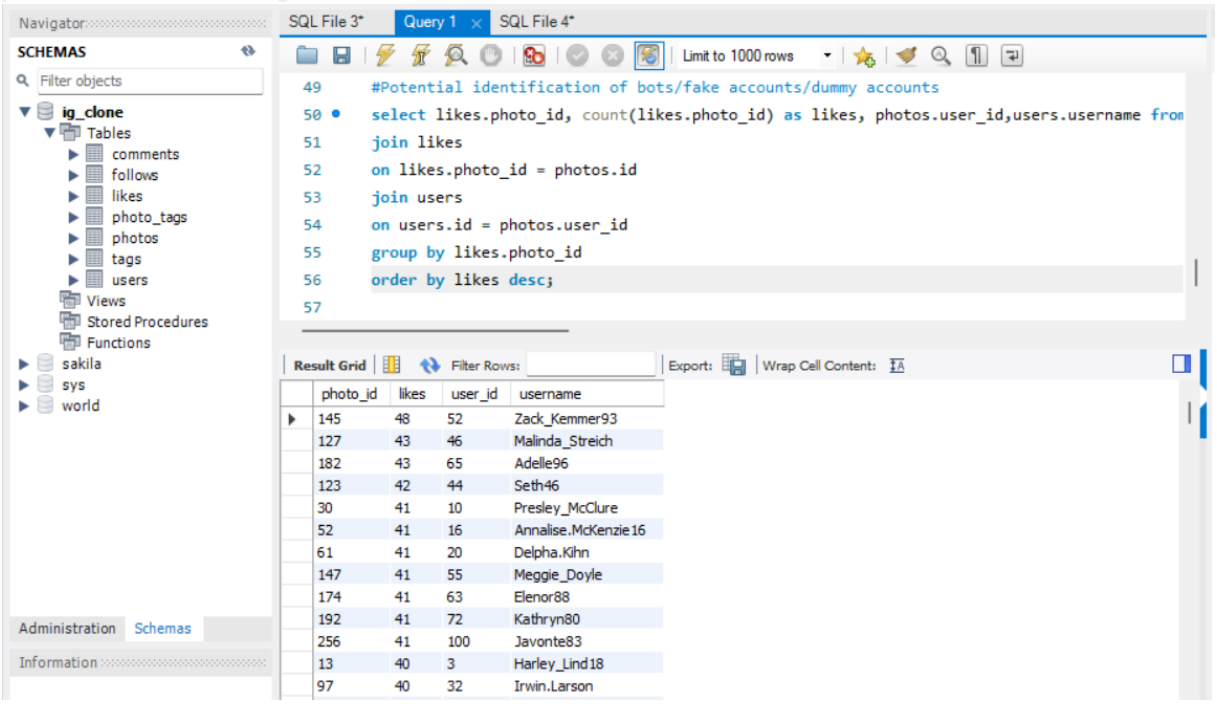
Limit to 1000 rows
40
41
42 #Average no. of posts per user
43 select count(photos.id) as Total_posts, count(distinct users.username) as Tota
44 left join photos
45 on users.id = photos.user_id;
46
47
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Total_posts Total_users Average_post_per_user
257 100 2.5700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SQL File 3*
Query 1
SQL File 4*
Limit to 1000 rows
49 #Potential identification of bots/fake accounts/dummy accounts
50 select likes.photo_id, count(likes.photo_id) as likes, photos.user_id,users.username from
51 join likes
52 on likes.photo_id = photos.id
53 join users
54 on users.id = photos.user_id
55 group by likes.photo_id
56 order by likes desc;
57
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
photo_id likes user_id username
145 48 52 Zack_Kemmer93
127 43 46 Malinda_Streich
182 43 65 Adelle96
123 42 44 Seth46
30 41 10 Presley_McClure
52 41 16 Annalise.McKenzie16
61 41 20 Delpha.Kihn
147 41 55 Meggie_Doyle
174 41 63 Elenor88
192 41 72 Kathryn80
256 41 100 Javonte83
13 40 3 Harley_Lind18
97 40 32 Irwin.Larson

Results

With the help of the analysis of the given data we have uncovered some important insights. Insights like users who are inactive on platform and users who have been with us since long time because of these data we could make attempts to approach both kind of users and reach them out with the respective measures like Loyalty program for the loyal users and reaching inactive users.

Also finding potential bots or fake accounts and identifying which day of the week the newest users enroll to the platform, helping in launching ad campaigns for new user attractions.