Instagram User Analytics

Description :

The Goal of this project is to identify the patterns & trends by understanding and analyzing Instagram users Data.

Derive meaningful insights for the Investors & Marketing Team regarding the user behavior.

Help Marketing Team formulate strategies based on the insights to increase the engagement on the platform and also help the Investors understand the direction in which Instagram is heading as a business.

Approach :

- Spend some time understanding the nature of the problem & the kind of analysis that would be needed.
- Study the Data provided.
- Understand the various tables and what kind of information they carry.
- Understand the relationships between the various tables.
- Finalize the tech/software's that would be needed for the analysis.

Tech-Stack Used :

- MySQL Workbench 8.0.32

  MySQL workbench is one of the most commonly used RDBMS in the industry. Which is easy to use and has an intuitive experience.

- Microsoft Excel 2021

  Used for basic analysis of the outputs of the queries.

Insights

Marketing Metrics

Rewarding Most Loyal Users :
5 Oldest Users of Instagram

User Names
Darby_Herzog
Emilio_Bernier52
Elenor88
Nicole71
Jordyn.Jacobson2

Query :

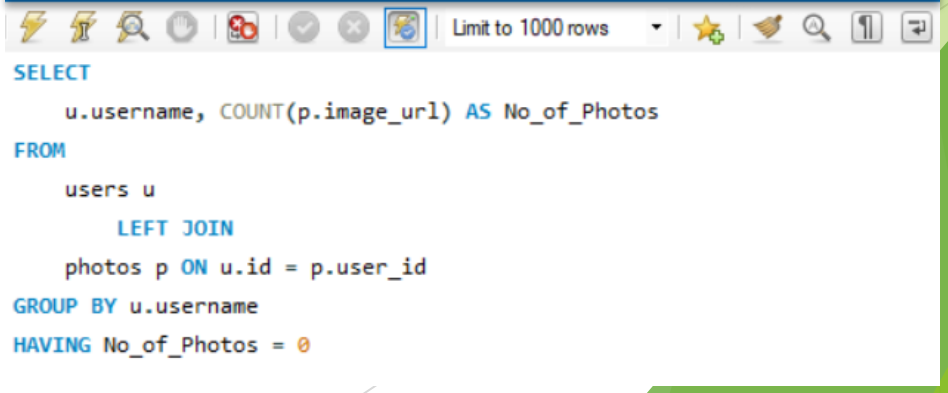
```
select * from users order by created_at
limit 5
```

Remind Inactive Users to Start Posting :

Users who have never posted a single photo

User Names	Number_of_Photos
Tierra.Trantow	0
Rocio33	0
Pearl7	0
Ollie_Ledner37	0
Nia_Haag	0
Morgan.Kassulke	0
Mike.Auer39	0
Mckenna17	0
Maxwell.Halvorson	0
Linnea59	0
Leslie67	0
Kasandra_Homenick	0
Julien_Schmidt	0
Jessyca_West	0
Janelle.Nikolaus81	0
Jaclyn81	0
Hulda.Macejkovic	0
Franco_Keebler64	0
Esther.Zulauf61	0
Esmeralda.Mraz57	0
Duane60	0
David.Osinski47	0
Darby_Herzog	0
Bethany20	0
Bartholome.Bernhard	0
Aniya_Hackett	0

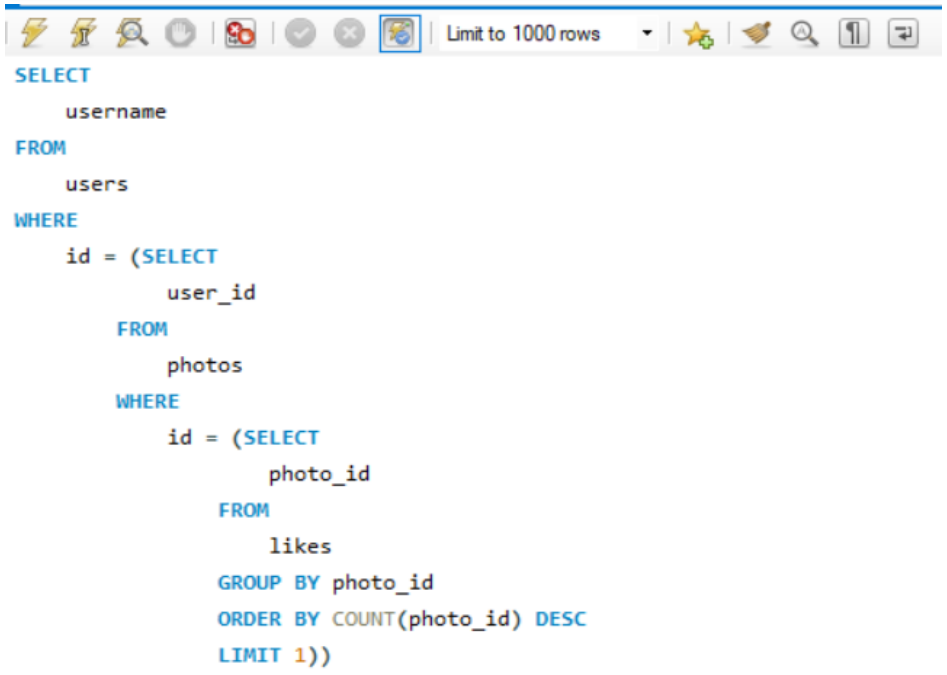
Query :



Declaring Contest Winner :
User with most likes on a single photo

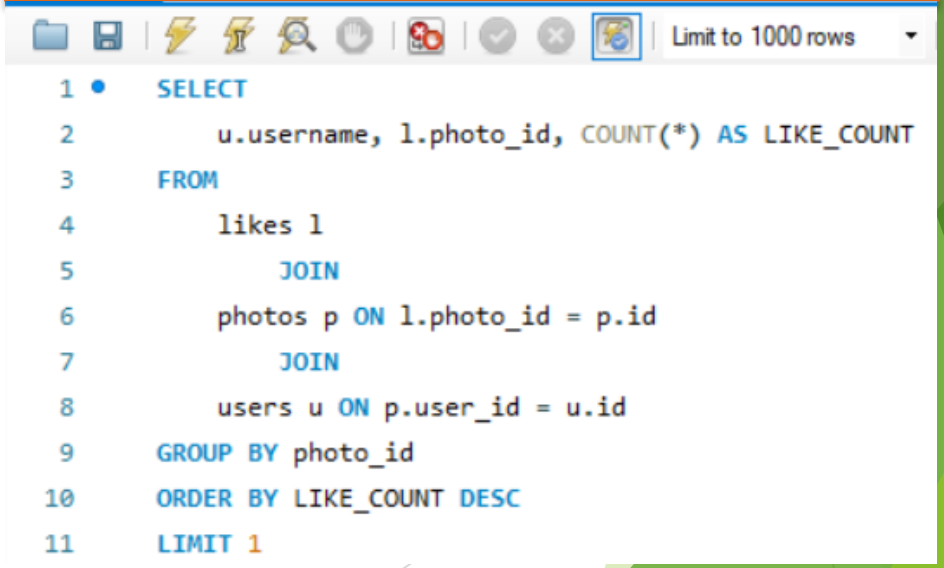
User Names
Zack_Kemmer93

Method 1 - Query :



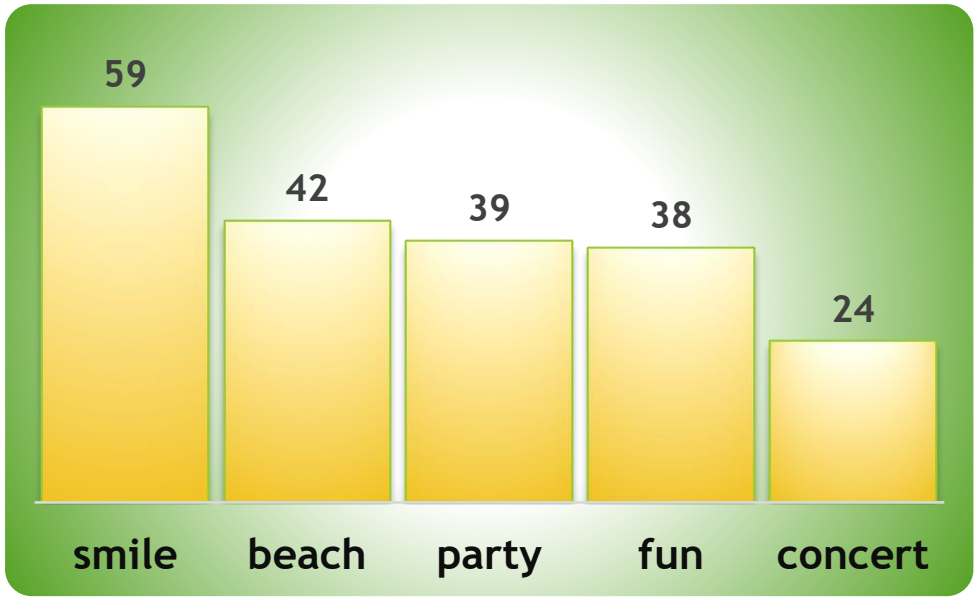
```
SELECT
    username
FROM
    users
WHERE
    id = (SELECT
            user_id
        FROM
            photos
        WHERE
            id = (SELECT
                    photo_id
                FROM
                    likes
                GROUP BY photo_id
                ORDER BY COUNT(photo_id) DESC
                LIMIT 1))
```

Method 2 - Query :



```
1  SELECT
2      u.username, l.photo_id, COUNT(*) AS LIKE_COUNT
3  FROM
4      likes l
5          JOIN
6      photos p ON l.photo_id = p.id
7          JOIN
8      users u ON p.user_id = u.id
9  GROUP BY photo_id
10 ORDER BY LIKE_COUNT DESC
11 LIMIT 1
```

Hashtag Researching :
Top 5 most commonly used Hashtags

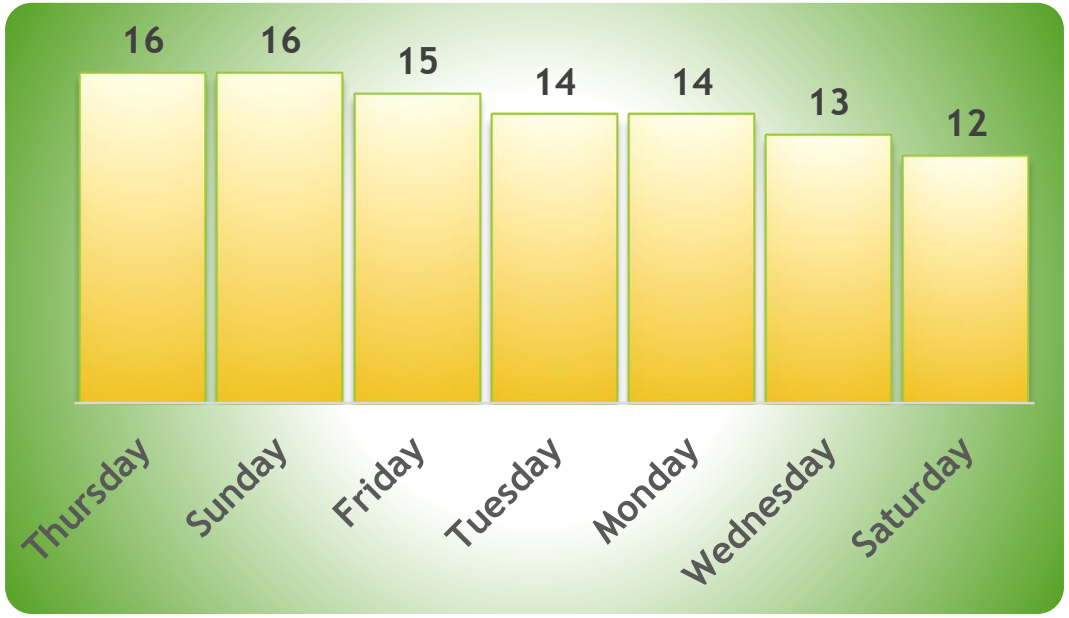


Query :

```
SELECT
    t.tag_name, COUNT(t.tag_name) AS Times_Used
FROM
    tags t
        JOIN
    photo_tags pt ON t.id = pt.tag_id
GROUP BY tag_name
ORDER BY Times_Used DESC
LIMIT 5
```

Launch AD Campaign:
Best day to launch ADs

Thursdays & Sundays



Query :

Limit to 1000 rows

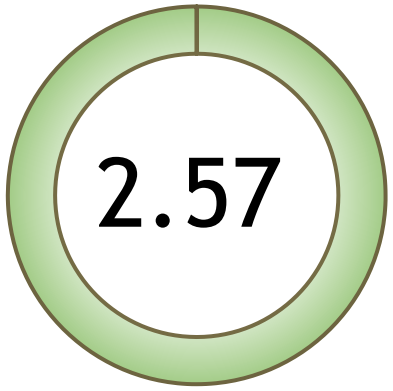
```
SELECT
    DAYNAME(created_at) AS day_of_week, COUNT(*) AS User_Count
FROM
    users
GROUP BY day_of_week
ORDER BY user_count DESC
```

Investor Metrics

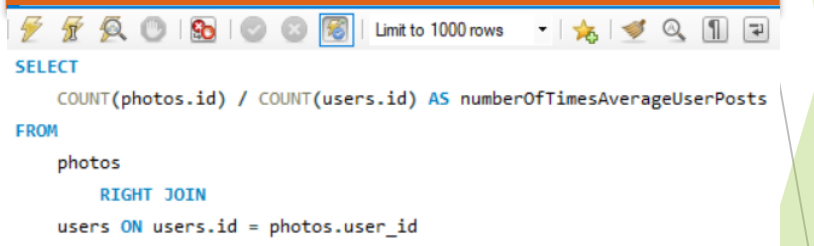
User Engagement :

Number of times Avg. user Posts

Total Photos/Total Users



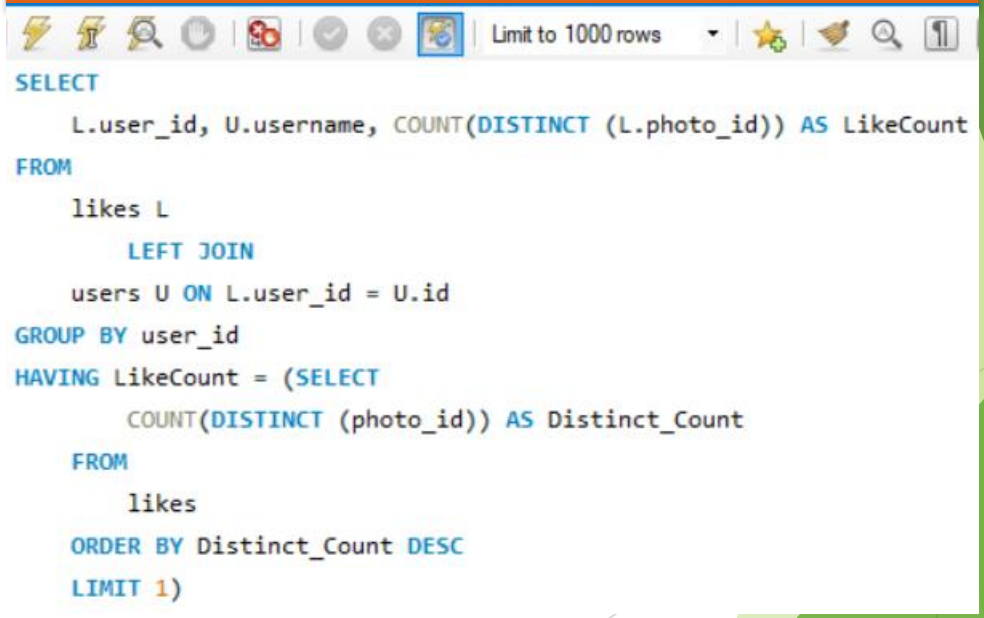
Query :



Bots & Fake Accounts :
Users (bots) who have liked every single photo

ID	User Name	Like Count
5	Aniya_Hackett	257
14	Jaclyn81	257
21	Rocio33	257
24	Maxwell.Halvorson	257
36	Ollie_Ledner37	257
41	Mckenna17	257
54	Duane60	257
57	Julien_Schmidt	257
66	Mike.Auer39	257
71	Nia_Haag	257
75	Leslie67	257
76	Janelle.Nikolaus81	257
91	Bethany20	257

Query :



Conclusions :

The Instagram user analytics project helped me gain insights into the data management of social media platforms like Instagram.

It gave me a better understanding of how organizations function and how teams such as Marketing use metrics to formulate campaigns that enhance and enrich the user experience and increase the bottom line of an organization.

The project also helped me understand the mindset of investors and the kind of questions they ask to understand a business and its approach towards profitability. Additionally, it helped me revise my concepts of SQL.