Instagram User Analytics

A PROJECT REPORT ON USERS INTERACTION AND ENGAGEMENT

Project Description

- The craze of using Instagram app is increasing as the days are passing. In this project we are analysing the data of Instagram app users about how they engage and interact with the product (software or mobile application).
- This project helps to analyse the raw data/metadata in order to derive business insights for marketing, product & development teams.
- These insights are then used by teams across the business to launch a new marketing campaign, decide on features to build for an app, track the success of the app by measuring user engagement.
- It helps us to increase efficiency of the platform and improve the experience altogether while helping the business grow.

Approach

- First of all, we create a database in SQL in our local machine using the dataset provided.
- After checking the data, a quick understanding of dataset was developed.
- Finally, using various data extraction, grouping and sorting queries, various insights are generated which are required for our analysis.

Tech-Stack Used

MySQL Workbench v8.0.32

was used as a query tool,

to query the database.

Projects Insights

Q1. Rewarding Most Loyal Users

People who have been using the platform for the longest time

- **Task**:- Find the 5 oldest users of the Instagram from the database provided.

- **Query**:-

```
SELECT username AS Most_loyal_customers
FROM users ORDER BY created_at LIMIT 5;
```

Result

Most_loyal_customers
Darby_Herzog
Emilio_Bernier52
Elenor88
Nicole71
Jordyn.Jacobson2

Q2. Remind Inactive Users to Start Posting

By sending them promotional emails to post their 1st photo

- **Task**:- Find the users who have never posted a single photo on Instagram.

- **Query**:-

```
SELECT username AS Inactive_users FROM users
WHERE id NOT IN (SELECT user_id FROM photos);
```

Result

Inactive_users
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

Q3. 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.

- **Task**:- Identify the winner of the contest and provide their details to the team

- **Query**:-

```
SELECT username AS Inactive_users FROM users WHERE id NOT IN
(SELECT user_id FROM photos);
```

Result

user_id	username	photo_id	image_url	Total_likes
3	Harley_Lind18	145	https://jarret.name	48

Q4. Hashtag Researching

A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform

- **Task**:- Identify and suggest the top 5 most commonly used hashtags on the platform

- **Query**:-

```
SELECT tag_name, COUNT(tag_id) AS
Tag_name_usage_counts FROM tags
LEFT JOIN      photo_tags
ON photo_tags.tag_id = tags.id
GROUP BY tag_name
ORDER BY Tag_name_usage_counts DESC LIMIT 5;
```

Result

	tag_name	Tag_name_usage_counts
▶	smile	59
	beach	42
	party	39
	fun	38
	concert	24

Q5. Launch AD Campaign

The team wants to know, which day would be the best day to launch ADs

- **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 User_register_count
FROM users GROUP BY Day
ORDER BY User_register_count DESC;
```

Result

Day	User_register_count
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

Investor Metrics

Q1. User Engagement

Are users still as active and post on Instagram or they are making fewer posts

- **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 username AS Inactive_users FROM users WHERE id NOT IN
(SELECT user_id FROM photos);
```

Result

	Average_users_posts
▶	2.57

Q2. Bots & Fake Accounts

The investors want to know if the platform is crowded with fake and dummy accounts.

- **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)

- **Query**:-

```
SELECT ROUND((SELECT COUNT(*) FROM photos) /
(SELECT COUNT(*) FROM users),2)
AS Average_users_posts;
```

Result

user_id	username
5	Aniya_Hackett
14	Jadyn81
21	Rocio33
24	Maxwell.Halvorson
36	Ollie_Ledner37
41	Mckenna17
54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
71	Nia_Haag
75	Leslie67
76	Janelle.Nikolaus81
91	Bethany20

Result

- I successfully analyzed dataset of Instagram user data using advanced data analysis techniques. This allowed me to identify patterns and trends in user behavior and engagement that were previously unknown.
- Overall, this project has been a highly rewarding experience that has helped me to develop a wide range of skills and knowledge.
- Through this project, I have gained valuable experience in data analysis, data visualization, and problem-solving, and I look forward to applying these skills in future projects and opportunities.