Instagram User Analytics

By Nikhil Yadav

Project Agenda:

- Project Description: Derived business insights for marketing, product & development teams which can be 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 and improve the experience altogether while helping the business grow.
- Approach:
    1. Database creation: Created and inserted data in the database using DDL and DML SQL queries provided by the product manager(as per the project) in the MySQL database using MySQL workbench.
    2. Extraction of insights: After creating the database required insights are generated from the database tables by running SQL queries in MySQL workbench.
- Tech-Stack Used: Used MySQL workbench 8.0 community server version 8.0.33 which is owned by oracle.

Task 1: **Find the 5 oldest users of Instagram**

Output:

username	created_at
Darby_Herzog	2016-05-06 00:14:21
Emilio_Bernier52	2016-05-06 13:04:30
Elenor88	2016-05-08 01:30:41
Nicole71	2016-05-09 17:30:22
Jordyn.Jacobson2	2016-05-14 07:56:26

Insights: A list of top 5 oldest users has been successfully identified on Instagram based on their account creation dates.

This information could be used for historical analysis and understanding the growth of the platform over time. The marketing team can also reward the most loyal users/customers from the business.

Task 2: **Find the users who have never posted a single photo on Instagram.**

Output:

id	username	no._of_posts
5	Aniya_Hackett	0
7	Kasandra_Homenick	0
14	Jaclyn81	0
21	Rocio33	0
24	Maxwell.Halvorson	0
25	Tierra.Trantow	0
34	Pearl7	0
36	Ollie_Ledner37	0
41	Mckenna17	0
45	David.Osinski47	0
49	Morgan.Kassulke	0
53	Linnea59	0
54	Duane60	0
57	Julien_Schmidt	0
66	Mike.Auer39	0
68	Franco_Keebler64	0
71	Nia_Haag	0
74	Hulda.Macejkovic	0
75	Leslie67	0
76	Janelle.Nikolaus81	0
80	Darby_Herzog	0
81	Esther.Zulauf61	0
83	Bartholome.Bernhard	0
89	Jessyca_West	0
90	Esmeralda.Mraz57	0
91	Bethany20	0

Insights: The list of users who have never posted any photos on Instagram has been generated.

This information could be valuable for targeted outreach or understanding the behavior of users who are less engaged with posting photos. The marketing team can remind the inactive users by sending promotional emails to them.

Task 3: **Identify the top 10 users who has the most number of likes count and provide their details to the team.**

Output:

photo_id	username	no_of_likes
145	Zack_Kemmer93	48
182	Adelle96	43
127	Malinda_Streich	43
123	Seth46	42
30	Presley_McClure	41
174	Elenor88	41
192	Kathryn80	41
147	Meggie_Doyle	41
61	Delpha.Kihn	41
52	Annalise.McKenzie16	41

Insights: A list of users along with the number of likes they have received on their photos has been provided.

This data can be used to identify and possibly collaborate with influencers or highly engaged users for marketing campaigns.

Task 4: **Identify and suggest the top 5 most commonly used hashtags on the platform.**

Output:

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

Insights: The most commonly used hashtag names and the number of times they have been used on the platform have been identified.

Businesses can leverage these hashtags in their marketing campaigns such as brand promotions to increase visibility and engagement.

Task 5: **Determine the day of the week with the most user registrations**

Output:

day	COUNT(username)
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

Insights: The distribution of user registrations by day of the week has been provided.

This information can guide the scheduling of ad campaigns, focusing efforts on days when new user registrations are higher.

Task 6: **Provide the average user posting frequency and total photos per user**

Output:

	tot_photos	tot_users	photo_per_user
▶	257	100	2.5700

Insights: The average user posts twice on Instagram, and there is an average of 2.57 photos per user.

The investors of the business by accessing the average posting frequency can plan content and engagement strategies.

Task 7: **Identify users (bots) who have liked every photo on the site**

Output:

username	likess
Aniya_Hackett	257
Bethany20	257
Duane60	257
Jadyn81	257
Janelle.Nikolaus81	257
Julien_Schmidt	257
Leslie67	257
Maxwell.Halvorson	257
Mckenna17	257
Mike.Auer39	257
Nia_Haag	257
Ollie_Ledner37	257
Rocio33	257

Insights: A list of users who have liked every single photo on the site has been generated.

The fake accounts or bots can be removed to enhance user experience and check the actual performance of the business.

Result:

- Learnt the fundamentals of data analysis using SQL queries on how to extract insights from the database which can be used to track the user engagement and engagement with the product (both desktop and mobile application) which would be an attempt to derive business insights for marketing, product & development teams.

THANK YOU