



Instagram User Analytics

B.tech (Dr. A.P.J. Abdul Kalam Technical University)

Project2: Instagram User Analytics

Description:

User analysis is the process by which we track how users engage and interact with our digital product (software or mobile application) in an attempt 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 and improve the experience altogether while helping the business grow.

You are working with the product team of Instagram and the product manager has asked you to provide insights on the questions asked by the management team.

You are required to provide a detailed report answering the questions below :

A) Marketing: The marketing team wants to launch some campaigns, and they need your help with the following

1. **Rewarding Most Loyal Users:** People who have been using the platform for the longest time.

Your Task: Find the 5 oldest users of the Instagram from the database provided

Answer:

```
select id, username, created_at
from users
order by created_at ASC
LIMIT 5;
```

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

2. **Remind Inactive Users to Start Posting:** By sending them promotional emails to post their 1st photo.

Your Task: Find the users who have never posted a single photo on Instagram

select username from users

left join photos on users.id=photos.user_id

where photos.id is null;

Results [Copy as Markdown](#)

Query #17 Execution time: 0ms

username
Aniya_Hackett
Kassandra_Homenick
Jaclyn81
Rocio33

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Complete User Name List:

username
Aniya_Hackett
Kassandra_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

- 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.

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

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;

```

username	id	image_url	total_likes
Kaley9	30	http://kenny.com	41

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 suggest the top 5 most commonly used hashtags on the platform

```

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

```

tag_name	total
smile	59
beach	42
party	39
fun	38
concert	24

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

```

SELECT date_format(created_at,'%W') AS 'Week Day', COUNT(*) AS 'Number of Registration '

```

FROM users
GROUP BY 1
ORDER BY 2 DESC;

Week Day	Number of Registration
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B) Investor Metrics: Our investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds

1. **User Engagement:** Are users still as active and post on Instagram or they are making fewer posts

Your Task: Provide how many times an average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

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

ROUND((SELECT COUNT(*)FROM photos)/(SELECT COUNT(*) FROM users),2)
2.57

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 have liked every single photo on the site (since any normal user would not be able to do this).

SELECT users.id,username, COUNT(users.id) As total_likes_by_user

```

FROM users
JOIN likes ON users.id = likes.user_id
GROUP BY users.id
HAVING total_likes_by_user = (SELECT COUNT(*) FROM photos);

```

Results

id	username	total_likes_by_user
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

<https://www.db-fiddle.com/>

Used above link to perform all analysis , Fetching data and tried to run in online software while running all queries required to answer all above questions.

Approach toward the project is to achieve the desired answer while performing all queries required.Understanding of question is a good brainstorming and great learning to perform analysis.