Name : Akhil Nair **Project Topic : Instagram User Analytics** Project No. : 2

Project-Description:

Analyzing user interactions and engagement with the Instagram app provides valuable insights that can drive business growth. User analysis involves monitoring how users interact with a digital product, such as a software application or mobile app. The insights gained from this analysis can benefit various teams within the organization.

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

1. 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

2. 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

3. **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

4. **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

5. 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

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Task-Preformed

1. **Rewarding Most Loyal Users:**

```
#LOYAL USERS REWARD

use ig_clone;

select users.id, users.username, users.created_at
from users
order by created_at ASC
limit 10;
```

OUTPUT

Result Grid | Filter Rows: | Edit:

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
NULL	NULL	NULL

2. **Remind Inactive Users to Start Posting:**

```
#chcek user engagement
select users.id, users.username, photos.user_id,photos.image_url
from users
left join photos on photos.user_id = users.id
where photos.user_id is null;
```

OUTPUT

id	username	user_id	image_url
5	Aniya_Hackett	NULL	NULL
7	Kasandra_Homenick	NULL	NULL
14	Jaclyn81	NULL	NULL
21	Rocio33	NULL	NULL
24	Maxwell.Halvorson	NULL	NULL
25	Tierra.Trantow	NULL	NULL
34	Pearl7	NULL	NULL
36	Ollie_Ledner37	NULL	NULL
41	Mckenna17	NULL	NULL
45	David.Osinski47	NULL	NULL
49	Morgan.Kassulke	NULL	NULL
53	Linnea59	NULL	NULL

id	username	user_id	image_url
54	Duane60	NULL	NULL
57	Julien_Schmidt	NULL	NULL
66	Mike.Auer39	NULL	NULL
68	Franco_Keebler64	NULL	NULL
71	Nia_Haag	NULL	NULL
74	Hulda.Macejkovic	NULL	NULL
75	Leslie67	NULL	NULL
76	Janelle.Nikolaus81	NULL	NULL
80	Darby_Herzog	NULL	NULL
81	Esther.Zulauf61	NULL	NULL
83	Bartholome.Bernhard	NULL	NULL
89	Jessyca_West	NULL	NULL

3. **Declaring Contest Winner:**

```
# most ikes on photos
select users.username, count(likes.user_id) as highest_likes , photos.image_url
from users
join photos on users.id = photos.user_id
join likes on photos.id = likes.photo_id
group by users.username, photos.image_url
order by highest_likes desc
limit 1;
```

OUTPUT

Result Grid | Filter Rows: | Expor

username	highest_likes	image_url
Zack_Kemmer93	48	https://jarret.name

4. Hashtag Researching:

```
#hashtags research
select tags.id, tags.tag_name, count(photo_tags.photo_id) as highest_tags
from tags
join photo_tags on tags.id = photo_tags.tag_id
group by tags.tag_name
order by  highest_tags desc
limit 10;
```

OUTPUT

Result Grid | Filter Rows:

id	tag_name	highest_tags
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24
5	food	24
11	lol	24
15	hair	23
12	happy	22
8	beauty	20

5. Launch AD Campaign:

```
#ad campaign launch
select dayname(created_at) as best_days, count(users.id) as resgistration_counts
from users
group by best_days
order by resgistration_counts desc;
```

OUTPUT

Result Grid | Filter Rows:

best_days	resgistration_counts
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B) Investor Metrics:

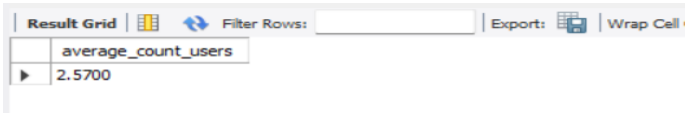
1. **User Engagement:** Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.
   Task: Calculate the average number of posts per user on Instagram. Also, provide the total number of photos on Instagram divided by the total number of users.
2. **Bots & Fake Accounts:** Investors want to know if the platform is crowded with fake and dummy accounts.
   Task: Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

TASK

1. **User Engagement:**

```
#user engagement
select count(photos.id)/ (select count(*)from users) as average_count_users
from photos
```

OUTPUT:



2. **Bots & Fake Accounts:**

```
1    #determine the accounts are fake or bots
2 •  select likes.user_id as fake_accounts , users.username as fake_names
3    from likes
4    join users on likes.user_id = users.id
5    group by user_id, fake_names
6    having count(distinct photo_id)=(select count(photos.user_id) from photos)
```

OUTPUT:

fake_accounts	fake_names
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
76	Janelle.Nikolaus81
91	Bethany20