trainity

Project-2: *Instagram User Analytics*

Submission by

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Project description

- This analysis project is the process by which we track how users engage and interact with *Instagram* digital product.
- *Instagram*'s product manager has asked to provide insights on the marketing and investor metric questions from the management team.
- These insights are then used by teams across the business to launch a new marketing campaign, decide on features to build for an app and track the success of the app.

A. Marketing:

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

- Rewarding Most Loyal Users
- Remind Inactive Users to Start Posting
- Declaring Contest Winner
- Hashtag Researching
- Launch AD Campaign

1. Rewarding Most Loyal Users:

- Rewarding most loyal people who have been using the platform for the longest time.
- **Task:** Find the 5 oldest users of the Instagram from the database provided.
- **Tool:** MYSQL database server

```
SELECT * FROM ig_clone.users
order by created_at
limit 5;
```

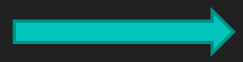
id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:30
63	Elenor88	2016-05-08 01:30:41
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:26

- **Solution:** The SQL code is the solution to fine 5 oldest IG-users. The logical approach is showcasing the oldest users sorted as per their date of registration into the instagram account.

2. Remind Inactive Users to Start Posting:

- Fetch inactive users to start sending promotional emails to post users 1st photo.
- **Task:** Find the users who have never posted a single photo on Instagram.
- **Tool:** MYSQL database server

```
select id, username
from ig_clone.users
where id not in (select user_id from ig_clone.photos);
```



id	username
5	Aniya_Hackett
7	Kasandra_Homenick
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
25	Tierra.Trantow
34	Pearl7
36	Ollie_Ledner37
41	Mckenna17
45	David.Osinski47
49	Morgan.Kassulke
53	Linnea59
54	Duane60

- **Solution:** The resultant analysis gives the usernames of IG users, who never posted a single photo on their account.

3. Declaring Contest Winner:

- Assist contest team that 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.
- **Tool:** MYSQL database server

```
select users.username as Winner_name,
likes.photo_id as photo_id,
COUNT(likes.photo_id) as photo_likes_count
from ig_clone.users
inner join ig_clone.photos
on users.id = photos.user_id
inner join ig_clone.likes
on photos.id = likes.photo_id
group by likes.photo_id
order by photo_likes_count DESC
limit 1;
```

Winner_name	photo_id	photo_likes_count
Zack_Kemmer93	145	48

- **Solution:** The winner of the contest as per the most likes on the photo of Zack_kemmer93.

4. Hashtag Researching:

- Report for a brand partner, on 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
- **Tool:** MYSQL database server

```
select tags.id, tag_name,
count(tag_name) as tag_count
from ig_clone.tags
inner join ig_clone.photo_tags
on tags.id = photo_tags.tag_id
group by tag_name
order by tag_count DESC
limit 5;
```

id	tag_name	tag_count
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24

- **Solution:** The list of top 5 commonly used #hashtags along with each hashtag usage count.

5. Launch AD Campaign:

- Helping the marketing team wants, 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.
- **Tool:** MYSQL database server

```
select WEEKDAY(created_at) AS weekday,
COUNT(WEEKDAY(created_at)) AS freq
from ig_clone.users
group by weekday
order by freq DESC;
```

weekday	freq
3	16
6	16
4	15
1	14
0	14
2	13
5	12

- **Solution:** As per acquired analysis weekdays 3,6 are most recommended for ad campaigning. Whereas weekday 4 is next ideal day or campaign.
- For this analysis the weekdays are numbered between **0** to **6** #E.g.: if Monday = 0 then Sunday = 6

B. Investor Metrics:

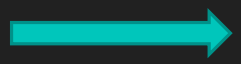
Investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds

- User Engagement
- Bots & Fake Accounts

1. 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.
- **Tool:** MYSQL database server

```
with total_posts as
    (select user_id,
    count(user_id) as number_of_posts
    from ig_clone.photos
    group by user_id)
select
avg(number_of_posts) as avg_number_of_posts,
count(user_id) as total_users
from total_posts;
```



avg_number_of_posts	total_users
3.4730	74

- **Solution:** The acquired solution gives average number of posts and total users using Instagram as per provided data.

2. 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).
- **Tool:** MYSQL database server

```
select likes.user_id,
count(photo_id) as photos_liked
from ig_clone.likes
inner join ig_clone.photos
ON ig_clone.likes.photo_id = photos.id
group by user_id
having count(distinct photo_id) = (select count(distinct id)
from ig_clone.photos);
```

user_id	photos_liked
5	257
14	257
21	257
24	257
36	257
41	257
54	257
57	257
66	257
71	257
75	257
76	257
91	257

- **Solution:** The acquired solution gives number of photos liked by each Instagram account user.

THANK YOU

- All the insights analysis in this project are done using MySQL code tool only.
- The database ig_clone used for this project is created with the command source script provided by *trainity*.