Instagram User Analytics

Project Description: The aim of this project builds useful insights from metadata using the MySQL workbench. Visualize them to increase them business efficiency.

Approach: The project was executed using SQL, where queries were utilized to create a database from the given raw metadata. Apply SQL queries and analysis with the given questions.

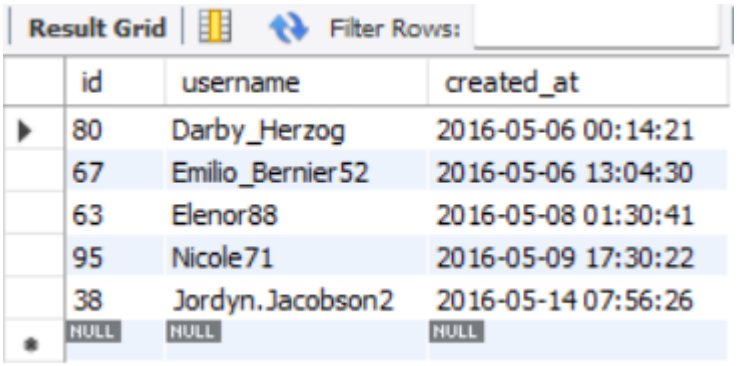
Tech-Stack Used: It included MySQL Workbench v8.0.30.0, which comfortable for the Instagram User Analysis.

Insights:

A) Marketing Analysis:

1. **Loyal User Reward:** Identify the five oldest users on Instagram from the provided database.

   Conclusion: These are the oldest user of Instagram.



Result Grid | Filter Rows:

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

   Code:

```
#1 Loyal User Reward :
select * FROM users
ORDER BY created_at
LIMIT 5;
```

2. **Inactive User Engagement:** Identify users who have never posted a single photo on Instagram.

   Conclusion: These users were inactive after their first post.

Code:

```
#2 Inactive User Engagement :

select username from users
left join photos on users.id=photos.user_id
where photos.id is null;
```

3. **Contest Winner Declaration**: Determine the winner of the contest and provide their details to the team.

   Conclusion: These are winner of the contest.

Result Grid | Filter Rows:

photo_id	username	likess
145	Zack_Kemmer93	48
127	Malinda_Streich	43
182	Adelle96	43
123	Seth46	42
30	Presley_McClure	41
52	Annalise.McKenzie16	41
61	Delpha.Kihn	41
147	Meggie_Doyle	41
174	Elenor88	41
192	Kathryn80	41
256	Javonte83	41
13	Harley_Lind18	40
97	Irwin.Larson	40
153	Aurelie71	40
161	Cesar93	40
244	Damon35	40
44	Alexandro35	39
62	Kenneth64	39
66	Eveline95	39
100	Yvette.Gottlieb91	39
107	Yazmin_Mills95	39
110	Kelsi26	39
118	Janet.Armstrong	39
119	Janet.Armstrong	39
144	Zack_Kemmer93	39
180	Florence99	39
199	Donald.Fritsch	39

Result Grid | Filter Rows:

photo_id	username	likess
240	Frederik_Rice	30
12	Harley_Lind18	29
33	Justina.Gaylord27	29
51	Annalise.McKenzie16	29
92	Jaime53	29
108	Jordyn.Jacobson2	29
129	Harrison.Beatty50	29
130	Harrison.Beatty50	29
131	Harrison.Beatty50	29
135	Gerard79	29
165	Cesar93	29
194	Kathryn80	29
208	Katarina.Dibbert	29
214	Milford_Gleichner42	29
215	Delfina_VonRueden68	29
22	Tabitha_Schamberg...	28
95	Aiyana_Hoeger	28
175	Elenor88	28
247	Keenan.Schamberg...	28
251	Tomas.Beatty93	28
8	Andre_Purdy85	27
50	Billy52	27
139	Mariano_Koch3	27
238	Clint27	27
195	Kathryn80	26
1	Kenton_Kirlin	25
223	Delfina_VonRueden68	25

Code:

```
#3 Contest Winner Declaration:

select * from likes,photos,users;
select likes.photo_id,users.username, count(likes.user_id) as likess
from likes inner join photos on likes.photo_id = photos.id
inner join users on photos.user_id=users.id group by
likes.photo_id,users.username order by likess desc;
```

4. **Hashtag Research:** Identify and suggest the top five most commonly used hashtags on the platform.

   Conclusion: These are the top five most commonly used hashtag on the platform.

Result Grid | Filter Rows:

tag_name	hashtags
smile	59
beach	42
party	39
fun	38
concert	24
food	24
lol	24
hair	23
happy	22
beauty	20
dreamy	20
drunk	19
fashion	19
sunset	19
landscape	17
style	17
sunrise	17
photogra...	16
stunning	16
delicious	15
foodie	11

Code:

```
# 4 Hashtag Research

select * from photo_tags,tags;
select t.tag_name, count(p.photo_id) as hashtags
from photo_tags p inner join tags t
on t.id=p.tag_id group by t.tag_name order by hashtags desc;
```

5. **Ad Campaign Launch:** Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.

   Conclusion: These are the day of the week when most users register on Instagram.

Result Grid | Filter Rows:

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

Code:

```
# 5 Ad Campaign Launch
select * from users;
select DATE_FORMAT((created_at), '%W') as day ,count(username)
from users group by 1 order by 2 desc;
```

B) Investor Metrics:

1. **User Engagement:** 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.

Conclusion:

Result Grid | Filter Rows:

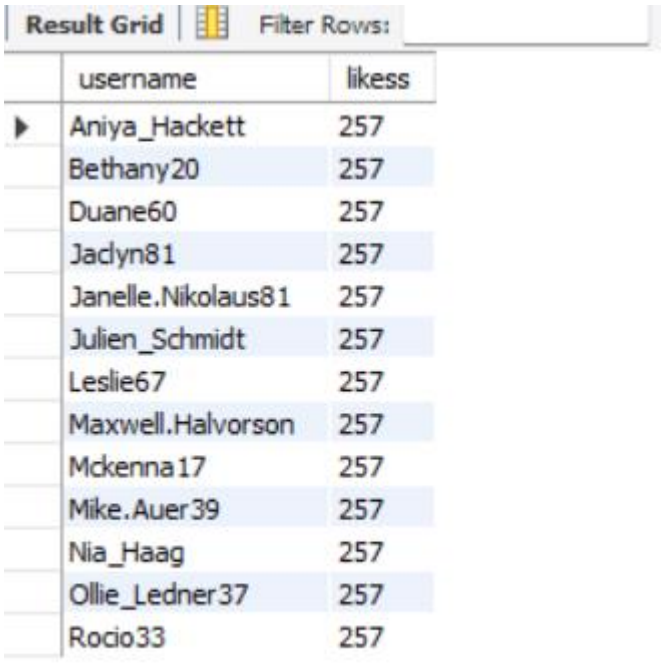
totalphotos	total_users	photoperuser
257	100	2.5700

Code:

```
# B) 1. User Engagement
select * from photos, users;
with base as (
select u.id as userid,count(p.id) as photoid from users  u
left join photos p on p.user_id=u.id group by u.id )
select sum(photoid) as totalphotos,count(userid)
as total_users,sum(photoid)/count(userid) as photoperuser
from base;
```

2. **Bots & Fake Accounts:** Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

Conclusion:



Result Grid | Filter Rows:

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

Code:

```
# B) 2. Bots & Fake Accounts
select * from users,likes;
with base as (
select u.username,count(l.photo_id) as likess from likes l inner join users u on u.id=l.user_id
group by u.username )
select username,likess from base where likess=(select count(*) from photos) order by username;
```