Instagram User Analytics

PROJECT DESCRIPTION: This project is basically to convert the raw data to valuable insights / information using different SQL queries to provide solution for the management's questions.

PROJECT APPROACH: I am going to use SQL to solve the given problems. By using SQL I can create a database to import the raw data and perform Data Extraction by using different queries.

TECH-STACK USED: I am going to use MYSQL workbench for this project because of its user interface. The user interface of this platform will help to access many information in the main screen itself. As a result, it is less time consuming and very user friendly.

PROJECT INSIGHTS:

Marketing

1. **Most Loyal User:**
   OBJECTIVE:
   To find 5 oldest Instagram users.

   Code used to get the result:

```
USE ig_clone;

select * FROM users

order by created_at

limit 5;
```

   Result :

Result Grid | Filter Rows:

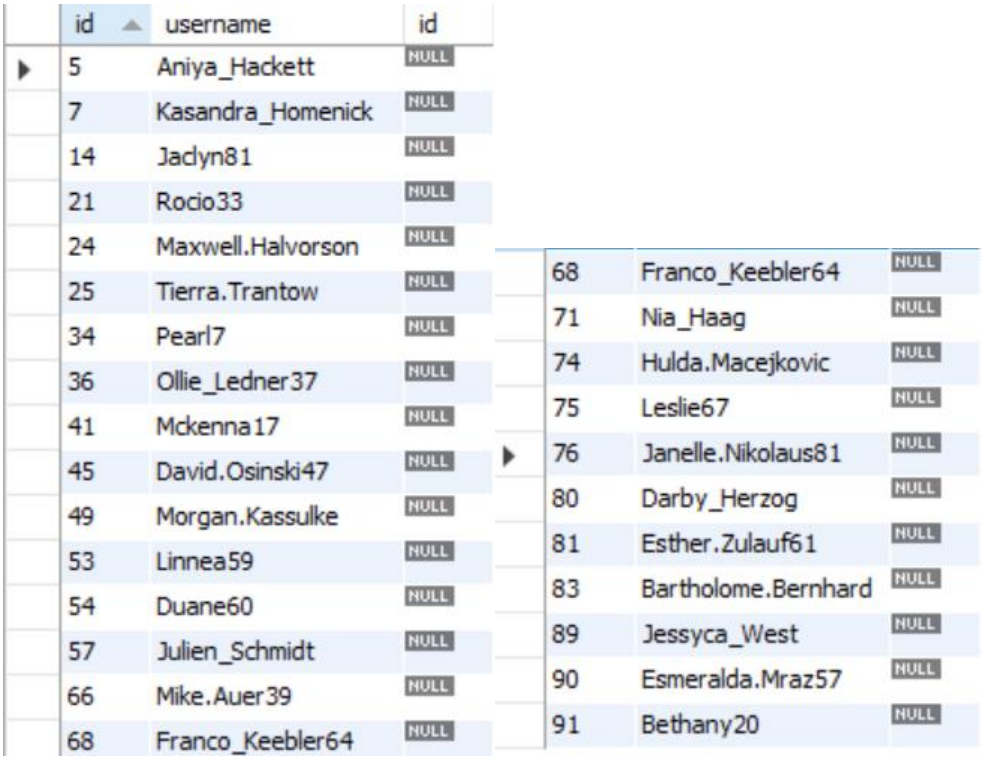
id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:30
63	Elenor88	2016-05-08 01:30:41
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:26
NULL	NULL	NULL

   Conclusion: These are the 5 Oldest user of Instagram.

2. **Remind Inactive Users to Start Posting**
   OBJECTIVE:
   To find the users who never posted anything.
   Code used to get the result:

```
USE ig_clone;
SELECT users.id, username, photos.id
FROM users
    left outer JOIN photos
    ON users.id = photos.user_id
    where image_url is null;
```

Result :



id	username	id
5	Aniya_Hackett	NULL
7	Kasandra_Homenick	NULL
14	Jadyn81	NULL
21	Rocio33	NULL
24	Maxwell.Halvorson	NULL
25	Tierra.Trantow	NULL
34	Pearl7	NULL
36	Ollie_Ledner37	NULL
41	Mckenna17	NULL
45	David.Osinski47	NULL
49	Morgan.Kassulke	NULL
53	Linnea59	NULL
54	Duane60	NULL
57	Julien_Schmidt	NULL
66	Mike.Auer39	NULL
68	Franco_Keebler64	NULL
68	Franco_Keebler64	NULL
71	Nia_Haag	NULL
74	Hulda.Macejkovic	NULL
75	Leslie67	NULL
76	Janelle.Nikolaus81	NULL
80	Darby_Herzog	NULL
81	Esther.Zulauf61	NULL
83	Bartholome.Bernhard	NULL
89	Jessyca_West	NULL
90	Esmeralda.Mraz57	NULL
91	Bethany20	NULL

Conclusion: These are the users who never posted a photo on Instagram.

3. Declaring contest winner

OBJECTIVE:

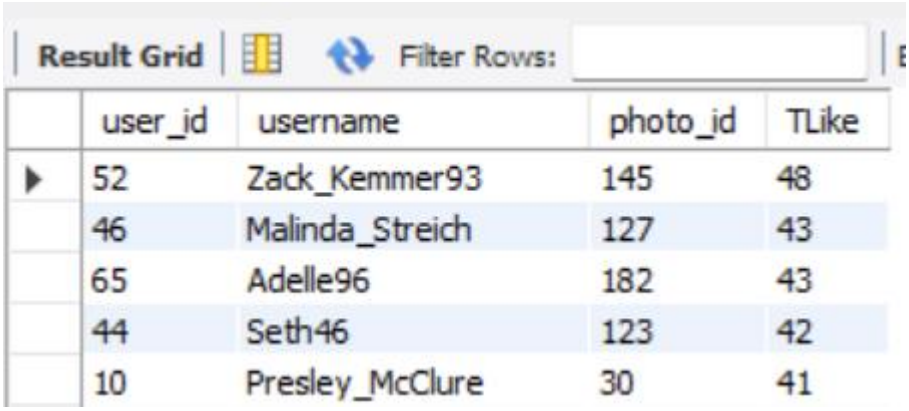
To find the winner of the contest

Code used to get the result:

```
SELECT photos.user_id,
        username,
        photo_id, COUNT(*) AS TLike
FROM photos
```

```
    INNER JOIN likes
  ON photos.id = likes.photo_id
    INNER JOIN users
  ON photos.user_id = users.id
GROUP BY photo_id
order by tlike desc ;
```

Result :



Result Grid | Filter Rows:

user_id	username	photo_id	TLike
52	Zack_Kemmer93	145	48
46	Malinda_Streich	127	43
65	Adelle96	182	43
44	Seth46	123	42
10	Presley_McClure	30	41

Conclusion: Zack_Kemmer93 of user_id **52** won the contest with **48 Likes** for the photo_id **145.**

4. Hashtag Researching

OBJECTIVE:

To find the hashtag with highest reach.

Code used to get the result:

```
select tag_name, id , count(*) as Reach
From photo_tags
inner join tags
on tags.id = photo_tags.tag_id
group by id
order by reach desc
limit 5;
```

Result:

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

Conclusion: The above-mentioned Tags are the Top 5 Tags in Instagram

5.Launch AD Campaign

OBJECTIVE:

Best day to Launch an AD.

Code used to get the result:

```
SELECT
   DAYNAME(created_at) AS Day, COUNT(*) AS `No of registers`
FROM
   users
GROUP BY day
ORDER BY `No of registers` DESC
LIMIT 2;
```

Result:

	Day	No of registers
▶	Thursday	16
	Sunday	16

Conclusion: Thursday and Sunday were the days with most no of registers.

Investor Metrics

1. User Engagement

OBJECTIVE:

To find the average photos uploaded by the user in Instagram

Code used to get the result:

```
select

round((select count(*) from photos) / ( select count(*) from users),2)

 as `Average photos Uploaded`;
```

Result:

	Average photos Uploaded
▶	2.57

Conclusion: On an average of 2.57 photos have been uploaded by a normal user.

2. Bots & Fake Accounts

OBJECTIVE:

Find the bots who liked every single photo.

Code used to get the result:

```
SELECT username, users.id, count(photo_id)
        as `No of likes`
FROM
   likes
      INNER JOIN
   users ON likes.user_id = users.id
        group by id
   order by `No of likes` desc;
```

Result:

	username	id	No of likes
▶	Rocio33	21	257
	Nia_Haag	71	257
	Aniya_Hackett	5	257
	Mike.Auer39	66	257
	Mckenna17	41	257
	Jaclyn81	14	257
	Julien_Schmidt	57	257
	Maxwell.Halvorson	24	257
	Janelle.Nikolaus81	76	257
	Leslie67	75	257
	Duane60	54	257
	Bethany20	91	257
	Ollie_Ledner37	36	257

Conclusion: The above-mentioned users are seeming to be bot or fake accounts as it liked all the phots in Instagram.

RESULT: This project helped me to understand quite a lot of things in SQL especially join and other functions and enjoyed it. I managed to find all the answer even after many trails and errors. I referred traininty's learning platform to resolve some doubts.