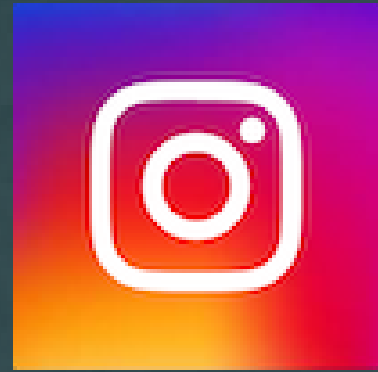
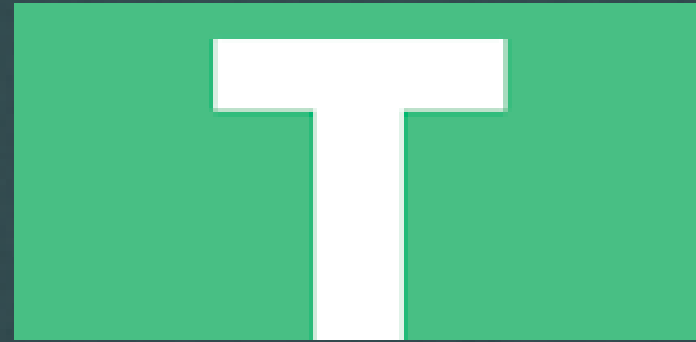


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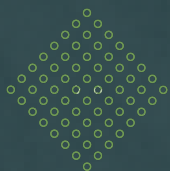


# INSTAGRAM USER ANALYTICS PROJECT

SQL FUNDAMENTALS

PRESENTED BY  
**KUMAR AJAY PRASAD**

(Data Analyst Trainee)



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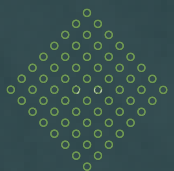
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# Project Description




The project aims to study and analyze user behavior on Instagram and provide insights to stakeholders.



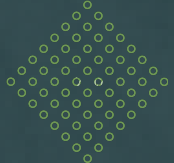
The project will identify ways for marketing, product and development teams to gain business insights. Through this project, we will gain knowledge about user behavior and engagement on the platform.




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




In this project our main job is to provide an answer the queries asked by the product team, such as active and inactive users, photos, likes, comments, hashtags research etc.



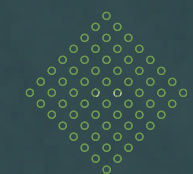


→ These insights are then used by teams across the business to launch a new marketing campaign, decide on features to build for an app, track the success of the app by measuring user engagement and improve the experience altogether while helping the business grow.



→ In order to provide information to the product manager, I have to run SQL software where I will create a database and get information from the relevant data sheet.

→ In order to draw meaningful conclusions I also had to analyze the collected data



The software database used to complete this project is: MySQL v 8.0.32 as it is easy to use and understandable.



(A) - 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.

SQL QUERY:-

```
/* 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*/
```

```
select * from users order by created_at asc limit 5;
```

RESULT :-

	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: By sending them promotional emails to post their 1st photo.

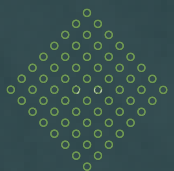
Task: Find the users who have never posted a single photo on Instagram

SQL QUERY:-

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

RESULT:-

username	image_url
Aniya_Hackett	NULL
Kasandra_Homenick	NULL
Jadyn81	NULL
Rodio33	NULL
Maxwell.Halvorson	NULL
Tierra.Trantow	NULL
Pearl7	NULL
Ollie_Ledner37	NULL
Mckenna17	NULL
David.Osinski47	NULL
Morgan.Kassulke	NULL
Linnea59	NULL
Duane60	NULL
Julien_Schmidt	NULL
Mike.Auer39	NULL
Franco_Keebler64	NULL
Nia_Haag	NULL
Hulda.Macejkovic	NULL
Leslie67	NULL
Janelle.Nikolaus81	NULL
Darby_Herzog	NULL
Esther.Zulauf61	NULL
Bartholome.Bernhard	NULL
Jessyca_West	NULL
Esmeralda.Mraz57	NULL
Bethany20	NULL



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.

QUERY:-

```
select username, photos.id, photos.image_url, count(*) as Total
from photos
inner join likes
    on likes.photo_id = photos.id
inner join users
    on photos.user_id = users.id
group by photos.id
order by Total desc
limit 1;
```

RESULT:-

Zack\_Kemmer93

**4. Hashtag Researching:** A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.

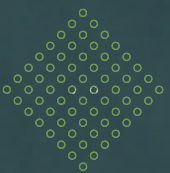
Task:- Identify and suggest the top 5 most commonly used hashtags on the platform

## QUERY:-

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

## RESULT:-

tag_name	total_tags
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.

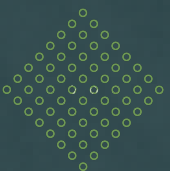
Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

### QUERY:-

```
select dayname(created_at) as day_name, count(*)  
as total from users  
group by day_name  
order by total desc  
limit 3;
```

### RESULT:-

day_name	total
Thursday	16
Sunday	16
Friday	15



**(B) 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

## QUERY:-

```
select (select count(*) from photos) / (select count(*) from users) as average  
count(*) as total_photos from photos;
```

## RESULT:-

average	total_photos
2.5700	257

**Bots & Fake Accounts:** The investors want to know if the platform is crowded with fake and dummy accounts

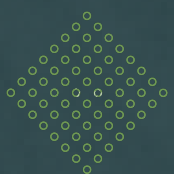
Task: Provide data on users (bots) who have liked every single photo on the site (since any normal user would not be able to do this)

## QUERY:-

```
select username, user_id, count(*) as total_likes from users
inner join likes
    on users.id = likes.user_id
group by likes.user_id
having total_likes = (select count(*) from photos);
```

## RESULT:-

Aniya_Hackett	5	257
Jadyn81	14	257
Rocio33	21	257
Maxwell.Halvorson	24	257
Ollie_Ledner37	36	257
Mckenna17	41	257
Duane60	54	257
Julien_Schmidt	57	257
Mike.Auer39	66	257
Nia_Haag	71	257
Leslie67	75	257
Janelle.Nikolaus81	76	257
Bethany20	91	257



# RESULT

This instagram user analytics project has provided us with valuable insights that can help us to create better products in the future. Through this project, we were able to gain insights into how users think and behave when interacting with a product