

# ★ Instagram User Analytics

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# Project Description

To derive useful insights from the Instagram user's data /metadata about

- user's behaviour
- marketing opportunities
- Inactive user
- top trends/hashtags
- Bots & fake accounts etc





# Project Approach:

- For executing the project ,the complete Instagram user database was created in SQL.
- Then, various SQL queries of sorting & data extraction were used to retrieve useful insights as per requirement from the product manager.

# Tech Stack Used

I have used MySQL Workbench 8.0 CE for executing my queries for the project.

I used MySQL workbench because of its easy to use user-friendly interface as well as troubleshooting support.



# Project Insights

## (A)Marketing

### 1) Rewarding Most Loyal Users:

People who have been using the platform for the longest time.

Query: `SELECT * FROM users  
ORDER BY created_at LIMIT 5;`



Insights: Users with ID's 80,67,63,95,38 were the oldest Instagram users and are the most loyal ones.

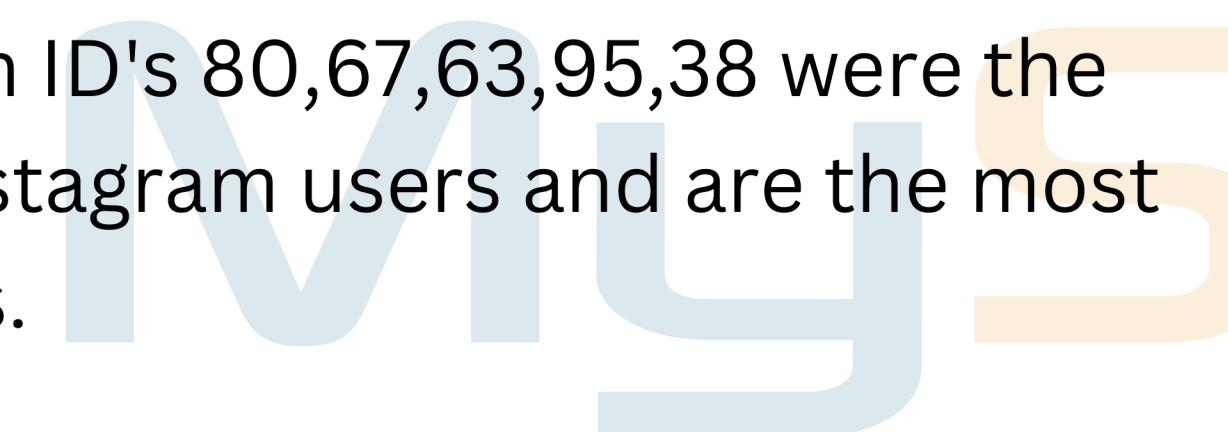
	<code>id</code>	<code>username</code>	<code>created_at</code>
▶	80	Darby_Herzog	2016-05-06 00:14:21
	67	Emilio_Bernier52	2016-05-06 13:04:30
	63	Elenor88	2016-05-08 01:30:41
	95	Nicole71	2016-05-09 17:30:22
	38	Jordyn.Jacobson2	2016-05-14 07:56:26
	NULL	NULL	NULL

## 2) Remind Inactive Users to Start Posting

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

**Query:** `SELECT * FROM users  
ORDER BY created_at LIMIT 5;`

**Insights:** Users with ID's 80,67,63,95,38 were the oldest Instagram users and are the most loyal ones.



A light blue outline of a polar bear is positioned above the table, facing right.

	<b>id</b>	<b>username</b>	<b>created_at</b>
▶	80	Darby_Herzog	2016-05-06 00:14:21
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*	NULL	NULL	NULL

## 2) Remind Inactive Users to Start Posting

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

**Query:** SELECT users.id, photos.id,  
users.username FROM users  
left JOIN photos  
ON users.id = photos.user\_id  
WHERE photos.id IS NULL  
ORDER BY username;



**Insights:** There are in total 26 users who have never posted a single photo on Instagram.

5	HULL	Aniya_Hackett
83	HULL	Bartholome.Bernhard
91	HULL	Bethany20
80	HULL	Darby_Herzog
45	HULL	David.Osinski47
54	HULL	Duane60
90	HULL	Esmeralda.Mraz57
81	HULL	Esther.Zulauf61
68	HULL	Franco_Keebler64
74	HULL	Hulda.Macejkovic
14	HULL	Jaclyn81
76	HULL	Janelle.Nikolaus81
89	HULL	Jessyca_West
57	HULL	Julien_Schmidt
7	HULL	Kassandra_Homenick
75	HULL	Leslie67
53	HULL	Linnea59
24	HULL	Maxwell.Halvorson
41	HULL	Mckenna17
66	HULL	Mike.Auer39
49	HULL	Morgan.Kassulke
71	HULL	Nia_Haag
36	HULL	Ollie_Ledner37
34	HULL	Pearl7
21	HULL	Rodo33
25	HULL	Tierra.Trantow

### 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

Query: SELECT photos.user\_id , likes.photo\_id ,  
COUNT(likes.photo\_id) as NtimesLiked ,  
users.username FROM likes  
LEFT JOIN photos ON likes.photo\_id = photos.id  
INNER JOIN users ON photos.user\_id = users.id  
GROUP BY photo\_id ORDER BY NtimesLiked  
Desc LIMIT 1;



MySQL

Result Grid			
user_id	photo_id	NtimesLiked	username
52	145	48	Zack_Kemmer93



Insights: ®

the winner of the contest is  
Zack\_Kemmer93 with 48 times liked  
on a single photo.

## 4) Hashtag Researching:

A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.

**Query:** select tag\_name ,count(\*) as NTimes from photo\_tags join tags on photo\_tags.tag\_id=tags.id group by tag\_name order by NTimes desc  
Limit 5

MuSQL

**Insights:** Top 5 most commonly used hashtags on the platform are smile,beach,party ,fun & concert.

	tag_name	NTimes
▶	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.

**Query:** Select dayname(created\_at) as day,  
count(\*) as NTimes from users  
group by day  
order by NTimes desc

**Insights:** Highest number of users registered on Thursday & Sunday.  
Then followed by Friday, Tuesday and so on.  
So, it's wise to schedule the ad on Saturday and Wednesday so as to increase the audience reach on those days.

	day	NTimes
▶	Thursday	16
	Sunday	16
	Friday	15
	Tuesday	14
	Monday	14
	Wednesday	13
	Saturday	12

# B) Investor Metrics

## 1) User Engagement:

Are users still as active and post on Instagram or they are making fewer posts

Query:    SELECT COUNT(id) / MAX(user\_id) AS AveragePost, MAX(id) AS TotalPost, MAX(user\_id) AS TotalUserFROM photos;



The MySQL logo features the word "MySQL" in a stylized font where each letter has a different color: M is blue, y is light blue, S is orange, Q is yellow, and L is orange. A registered trademark symbol (®) is located to the right of the L. Below the main text, the word "Insights:" is written in a smaller, bold, black font.

Result Grid		
AveragePost	TotalPost	TotalUser
2.5700	257	100

Result Grid | Filter Rows:

A user has 2.57 posts on an average.  
There are 257 photos in total on Instagram.  
There are 100 users in total on Instagram.

## 2) Bots & Fake Accounts:

The investors want to know if the platform is crowded with fake and dummy accounts

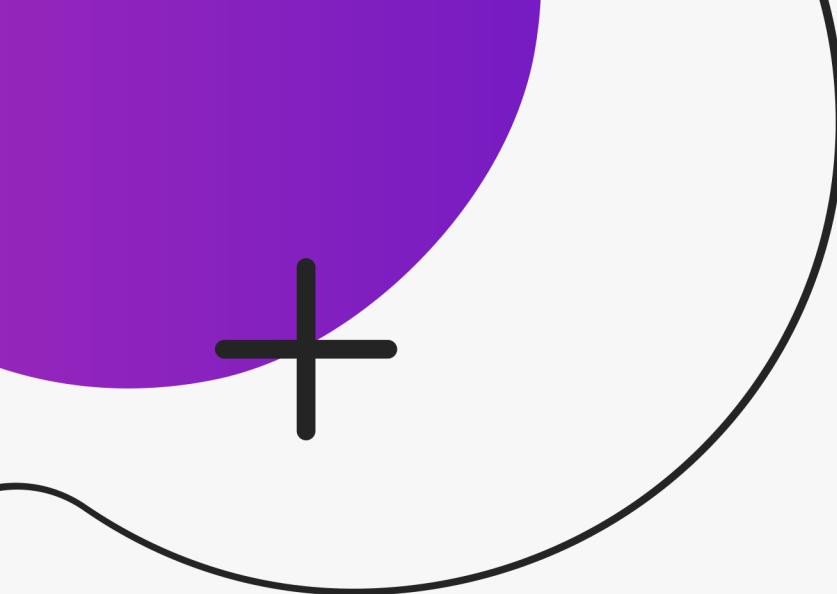
**Query:**

```
SELECT users.id,username,COUNT(users.id) As  
total_likes  
FROM users  
JOIN likes ON users.id = likes.user_id  
GROUP BY users.id  
HAVING total_likes =  
        (SELECT COUNT(*) FROM photos);
```

The MySQL logo, consisting of the letters 'M', 'Y', 'S', and 'Q' in a stylized font, is overlaid on the slide.

**Insights:** There are 13 users (bots) who have liked every single photo on the site.

	user_id	username	LikeCount
▶	5	Aniya_Hackett	257
	14	Jadyn81	257
	21	Rodo33	257
	24	Maxwell.Halvorson	257
	36	Ollie_Ledner37	257
	41	Mckenna17	257
④	54	Duane60	257
	57	Julien_Schmidt	257
	66	Mike.Auer39	257
	71	Nia_Haag	257
	75	Leslie67	257
	76	Janelle.Nikolaus81	257
	91	Bethany20	257



# Result

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01

I learned to create the database in MYSQL workbench on my own.

02

I learned to write Queries to find the relevant information from the enormous dataset.

03

I also learned to derive business insights from the given queries.Thus ,helping the business stakeholders to take various effective decisions

