

# Instagram User Analytics

## DATA REPORT

### SQL Tasks

#### A) Marketing Analysis:

**Loyal User Reward:** The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.

**Task:** Identify the five oldest users on Instagram from the provided database.

#### Output:

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

#### Syntax:

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


**Result:** The five oldest Instagram users are ID(80,67,63,95,38).

**Inactive User Engagement:** The team wants to encourage inactive users to start posting by sending them promotional emails.

**Task:** Identify users who have never posted a single photo on Instagram.


## Output:

Result Grid




Filter Rows:

Export:



Wrap Cell Content:



	id	username	created_at	id	image_url	user_id	created_dat
▶	1	Kenton_Kirlin	2017-02-16 18:22:11	NULL	NULL	NULL	NULL
	2	Andre_Purdy85	2017-04-02 17:11:21	NULL	NULL	NULL	NULL
	3	Harley_Lind18	2017-02-21 11:12:33	NULL	NULL	NULL	NULL
	4	Arely_Bogan63	2016-08-13 01:28:43	NULL	NULL	NULL	NULL
	5	Aniya_Hackett	2016-12-07 01:04:39	NULL	NULL	NULL	NULL
	6	Travon.Waters	2017-04-30 13:26:14	NULL	NULL	NULL	NULL
	7	Kasandra Homenick	2016-12-12 06:50:08	NULL	NULL	NULL	NULL

## Syntax:



```
select * from users as a
left join photos as b on
a.id = b.user_id and
b.user_id is null
```

**Contest Winner Declaration:** The team has organized a contest where the user with the most likes on a single photo wins.

**Task:** Determine the winner of the contest and provide their details to the team.

## Output:

Result Grid



Filter Rows:

	username	image_url	total_likes
▶	Zack_Kemmer93	https://jarret.name	48

**Result:** Most likes in single post is 48 by zack kemmer93.

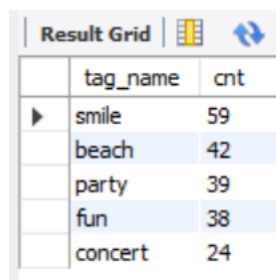
## Syntax:

```
select username,photos.image_url,count(*) as total_likes 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 total_likes desc
limit 1;
```

**Hashtag Research:** A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

**Task:** Identify and suggest the top five most commonly used hashtags on the platform.

## Output:



	tag_name	cnt
▶	smile	59
	beach	42
	party	39
	fun	38
	concert	24

## Syntax:

```
select a.tag_name ,count(b.tag_id) as cnt from tags as a
left join photo_tags as b
on a.id = b.tag_id
group by a.tag_name
order by cnt desc
limit 5
```

**Result:** The most used 5 hashtag names are smile,beach,party,fun & concert.

**Ad Campaign Launch:** The team wants to know the best day of the week to launch ads.

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

**Output:**

Result Grid		
	day	total
▶	Thursday	16
	Sunday	16

**Syntax:**

```
select dayname(created_at) as day,  
count(*) as total  
from users  
group by day  
order by total desc  
limit 2;
```

**Result:** the most users register on Thursday and Sunday.

**B) Investor Metrics:**

**User Engagement:** Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.

**Task:** 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.

**Output:**

Result Grid	
	no_photos
▶	257

Result Grid	
	no_users
▶	100

Result Grid	
	Avg
▶	2.5700

## Syntax:

```
select count(*) as no_photos from photos;
select count(*) as no_users from users;
```

```
select (select count(*) as no_photos from photos) / (select count(*) as no_users from users) as Avg;
```

**Result :** The average no of posts per instagram user is 2.57.

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

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

## Output:

Result Grid			Filter Rows:
	username	num_likes	
▶	Aniya_Hackett	257	
	Jadyn81	257	
	Rocio33	257	
	Maxwell.Halvorson	257	
	Ollie_Ledner37	257	
	Mckenna17	257	
	Duane60	257	
	Julien_Schmidt	257	
	Mike.Auer39	257	
	Nia_Haag	257	
	Leslie67	257	
	Janelle.Nikolaus81	257	
	Bethany20	257	

## Syntax:

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

**Result:** I found out there are 13 fake accounts.