

## Instagram User Analytics

- **Project description:**

project is for finding out various insights in the given database(Instagram user database). We analyzed the data and find answers to the following questions:

**A) Marketing :**

- 1) Find the 5 oldest users of Instagram from the database provided.
- 2) Find the users who have never posted a single photo on Instagram.
- 3) Identify the winner of the contest and provide their details to the team.
- 4) Identify and suggest the top 5 most commonly used hashtags on the platform.
- 5) What day of the week do most users register on? Provide insights on when to schedule an ad campaign.

**B) Investor metrics :**

- 6) Provide how many times does an average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users.
- 7) Provide data on users (bots) who have liked every single photo on the site.

- **Approach:**

I began creating tables in MY-SQL server. After finishing creation of tables, I added the data into each table. Afterwards checking all the table's content carefully. After analysing the database carefully and Observing all the tables, columns, rows among all the tables. Then one by one I have executed queries according to the questions asked.

- **Tech-Stack Used:**

I used MY-SQL workbench to execute queries because it is easy to use as well as easy to understand.

- **Observation/insights**

**A)Marketing:**

1. Find the 5 oldest users of Instagram from the database provided.

**Query:**

```
SELECT * FROM users Order by Created_at asc limit 5
```

	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. Find the users who have never posted a single photo on Instagram.**

**Query:**

```
SELECT u.username, u.id FROM users u LEFT JOIN photos p ON u.id =p.user_id
Where p.user_id is NULL
```

	username	id
▶	Aniya_Hackett	5
	Kasandra_Homenick	7
	Jadyn81	14
	Rocio33	21
	Maxwell.Halvorson	24
	Tierra.Trantow	25
	Pearl7	34
	Ollie_Ledner37	36
	Mckenna17	41
	David.Osinski47	45
	Morgan.Kassulke	49
	Linnea59	53
	Duane60	54

	username	id
	Julien_Schmidt	57
	Mike.Auer39	66
	Franco_Keebler64	68
	Nia_Haag	71
	Hulda.Macejkovic	74
	Leslie67	75
	Janelle.Nikolaus81	76
	Darby_Herzog	80
	Esther.Zulauf61	81
	Bartholome.Bernhard	83
	Jessyca_West	89
	Esmeralda.Mraz57	90
	Bethany20	91

**3. Identify the winner of the contest and provide their details to the team.**

**Query:**

```
SELECT COUNT (*) AS Number_of_likes,user_id FROM likes
JOIN users ON id=user_id GROUP BY user_id
ORDER BY Number_of_likes DESC LIMIT 1
```

	Number_of_likes	user_id
▶	257	5

**4. Identify and suggest the top 5 most commonly used hashtags on the platform.**

**Query:**

```
SELECT tag_name FROM tags JOIN photo_tags ON tag_id = id GROUP BY tag_name
```

	tag_name
▶	beach
	beauty
	concert
	delicious
	dreamy

**5. What day of the week do most users register on? Provide insights on when to schedule an ad campaign.**

**Query:**

```
SELECT date_format(created_at,'%W') AS 'day of the week', COUNT(*) AS 'total registration'
FROM users
GROUP BY 1
ORDER BY 2 DESC;
```

	day of the week	total registration
▶	Thursday	16
	Sunday	16
	Friday	15
	Tuesday	14
	Monday	14
	Wednesday	13
	Saturday	12

## **B) Investor matrices**

**1. Provide how many times does an average user posts on Instagram. a) provide the total number of photos on Instagram/ b) total number of users.**

**Query:**

Select floor(count(\*)/count(distinct(user\_id))) as AvgPostsPerUsers,count(image\_url ) as totalNumof posts  
From photos

	AvgPostsPerUsers
▶	3

a)provide the total number of photos on Instagram

**Query:**

Select count(distinct(image\_url)) as total\_no\_of\_photos  
From photos

	total_no_of_photos
▶	257

b) total number of users

**Query:**

Select count (\*) as total\_no\_users  
From users

	total_no_users
▶	100

2.Provide data on users (bots) who have liked every single photo on the site

**Query:**

SELECT user\_id AS bots FROM likes GROUP BY user\_id  
HAVING COUNT (user\_id)=(SELECT COUNT(image\_url) FROM photos

	bots
▶	5
	14
	21
	24
	36
	41
	54
	57
	66
	71
	75

	75
	76
	91

- **Results:**

I gained knowledge on SQL functions which helped me to solve the questions in the project

I used various functions of SQL to find the satisfactory answers

For eg: Top, order by, maximum, minimum, average, join, group by  
Count, etc.