



Instagram User Analytics

Project Description

- This project contains analysis of Instagram users which include contents like users, likes, comments, photos, follows, photo-tags & tags
- Our objective is to find insights on the questions asked by management team
- 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.

Approach

- In order to execute the project, SQL was used. SQL queries were used to create a database using the raw data provided. Once the database was created, various sorting and data extracting queries were used to get the data insights required



Tech Stack Used – MySQL Workbench 8.0 CE



Insights

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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.

SQL Query :

```
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.

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

SQL Query :

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

Following users haven't posted lately:

Result:

1. Aniya_Hackett, 2. Kasandra_Homenick, 3. Jaclyn81, 4. Rocio33
5. Maxwell.Halvorson, 6. Tierra.Trantow, 7. Pearl7, 8. Ollie_Ledner37
9. Mckenna17, 10. David.Osinski47, 11. Morgan.Kassulke, 12. Linnea59
13. Duane60, 14. Julien_Schmidt, 15. Mike.Auer39,
16. Franco_Keebler64
17. Nia_Haag, 18. Hulda.Macejkovic, 19. Leslie67, 20. Janelle.Nikolaus81
21. Darby_Herzog, 22. Esther.Zulauf61, 23. Bartholome.Bernhard,
24. Jessyca_West, 25. Esmeralda.Mraz57, 26. Bethany20

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.

Your Task: Identify the winner of the contest and provide their details to the team

SQL Query :

```
select username, photos.id, photos.image_url, count(*) as Total_likes 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_likes desc
limit 3;
```

Result:

	username	id	image_url	Total_likes
▶	Zack_Kemmer93	145	https://jarret.name	48
	Adelle96	182	https://dorcias.biz	43
	Malinda_Streich	127	https://celestine.name	43

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

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

SQL 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.

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

SQL Query :

```
select dayname(created_at) as Day_Name, count(*) as Total from users
group by day_name
order by total desc
limit 4;
```

Result:

	Day_Name	Total
▶	Thursday	16
	Sunday	16
	Friday	15
	Tuesday	14

1. User Engagement: Are users still as active and post on Instagram or they are making fewer posts

Your Task: Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

SQL 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

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

Your 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).

SQL 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:

	username	user_id	total_likes
►	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

Results found

1. Id no 80,67,63, 95 38 are first users who joined Instagram.
2. Total 26 inactive users found.
3. Zack_Kemmer93 is a winner of the contest.
4. Smile, beach, party, fun, concert are most widely used hashtags.
5. We can launch AD campaign on Thursday, Sunday & Friday.
6. Average of posts per user is 2.57.
7. Total 13 users are there who have like on every single post.



Thank You