Instagram User Analytics

WHAT IS USER ANALYSIS?

User analysis is the process by which engineers and developers track how users engage and interact with their software, product, or application in an attempt to improve their product. Through user analytics we can understand how the users are engaging with our product . By tracking we can also make better decisions in order to improve our customers' relationships.

INSTAGRAM USER ANALYTICS

Because of the spread of the Internet, social platforms become big data pools.From there we can learn about the trends, culture and hot topics.Instagram analytics can help you target the right audience, improve your content strategy, and reach new audiences.Instagram analytics are the best way to understand who your audience is, when they're most active, and what type of content they engage with the most. 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.

ABOUT THIS PROJECT

This project focuses on analyzing the data from Instagram which is provided by the management team. My task here is to find the questions provided by the team and to find out their insights . So that 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 .

The data is based on 100 users in the database name as ig_clone and it has 7 tables.

The details of the tables are given below:

- **Users:** contains the id of the users , username and the time when id was created.

- **Photos:** contains the id ,image url, user_id and date at which the photo was posted.
- **Comments:** contains the id, text of the comments left on posts ,user_id ,photo_id,and the time at which the comment was created.
- **Likes:**contains user_id,photo_id and the time at which the user likes the photo.
- **Followers:** contains the followers_id,followee_id and created_at.
- **Tags:** contains the id,tag_name, and the time at which the tag was created.
- **Photo_tags:** contains the photo_tag and tag_id.

In this project I will find the most loyal users, inactive users, contest winner. Hashtag researching and ads campaigns so that the marketing team are able to launch the campaigns.

I will also find about the user engagement on Instagram and fake accounts on Instagram so that aur investors are able to know that if Instagram is performing well and is not becoming redundant like Facebook.

How I do this project?

1. Create a Database: I created the database to work on.
2. Perform Analysis: I used SQL to perform an entire analysis for answering the questions .

THE TOOLS AND TECHNOLOGIES

The tools and technologies that I am going to use in this project would be Instagram data provided by trainity and MySql workbench .
MySQL Workbench is widely used to handle structured data.MySQL is an open-source Relational Database Management System (RDBMS) developed by Oracle Corporation, Sun Microsystems, that uses Structured Query language(SQL) to interact with databases. We can use MySQL to store, retrieve, manipulate and process data that is in the form of tables.

Why I am using the sql workbench?

- MySQL Workbench gives access to add and remove.
- MySQL Workbench grants and revokes privileges.
- We can modify global and database permissions on the MySQL server.
- We can change passwords using MySQL.
- We can audit to see who did what and when on the serve
- Multiple queries can be run at a time, and the result is automatically displayed.

A) Marketing Insights:

Q1 - Find the 5 oldest users of the Instagram from the database provided?

```
select username from users
order by created_at
```

```
limit 5;
```

By using the above query I found that the oldest user registered on 06 May 2016 and 5 oldest users are:

1. Darby_Herzog
2. Elenor88
3. Emilio_Bernier52
4. Jordyn.Jacobson 2
5. Nicole71

Q2- Find the users who have never posted a single photo on Instagram?

```
select username from user where users.id not in (select user_id from photos);
```

From the above query I found that there are 26 users who never posted a single photo on Instagram .
By sending these peoples promotional emails the marketing team can revive the inactive users to post their 1st photo .

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

Q3) Identify the winner of the contest and provide their details to the team

```
select likes.user_id , users.username,  likes.photo_id ,count(likes.photo_id)
as like from likes join users on likes.user_id =  users.id
group by photo_id
order by most_liked desc
limit 1;
```

By using the above query I found that Harley_lind18 is the winner of the contest as they gets the maximum likes on photo and their details are:

Username = Harely_lind18
Photo_id = 145
User_id = 3
most_liked= 48

Q4) Identify and suggest the top 5 most commonly used hashtags on the platform

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

By using the above command I found that following are the top 5 hashtags that are mostly used:

1. Smile
2. Beach
3. Party
4. Fun
5. Concert

Q5) What day of the week do most users register on? Provide insights on when to schedule an ad campaign?

```
select dayname(created_at) ,count(*) from users
group by dayname(created_at)
order by count(*) desc ;
```

By using the above query that mostly people register on Thursday and Sunday so these two days would be the best day to launch Ads.

B) Investor Metrics insights:

Q1)Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

```
select users.id ,users.username ,count(photos.user_id) from users
left join photos on photos.user_id = users.id group by username;
```

By using the above query. I found that maximum users post on Instagram between 0 to 12. We see that users are still active and post on Instagram. There are also around 26 peoples who are making fewer posts.

```
select round(((select count(user_id) from photos)/(select count(id) from users)),2);
```

By using the above command I found that the ratio of total number of photos and total number of users is : 2.57

Q2) 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)

```
select users.username ,count(likes.user_id) from likes
join users on users.id =   likes.user_id group by user_id
having count(likes.user_ID) = 257;
```

By using the above query We see clearly see that the platform is crowded with 13 dummy and fake accounts and their usernames are given below:

1. Aniya_Hackett
2. Jaclyn81
3. Rocio33
4. Maxwell.Halvorson
5. Ollie_Ledner37
6. Mckenna17
7. Duane60
8. Julien_Schmidt
9. Mike.Auer39
10. Nia_Haag
11. Leslie67

12. Janelle.Nikolaus81
13. Bethany20

RESULT:

How this project me:This project helps me to understand the importance of data analysis. Through this project I am able to understand how the companies use instagram user analysis as a secret weapon. With an informed and proactive approach, they can leverage Insights to make data-backed decisions that optimize their Instagram strategy and boost ROI.

Challenges that I faced in this project : : Personally I feel that it took me a while to get really comfortable with joins and honestly I would probably take a while to come up with these answers. The biggest challenge is that one table has description and another table has its count.Tags table has the list of all the hashtags while photo_tag table has the details about where those hashtags are used,so that we can count the number of each hashtags.

Conclusion: Knowing how to interpret Instagram metrics in real time can help us to find out what content performs best and adjust marketing efforts while maximizing the undeniable potential of Instagram.Whenever utilized correctly data analytics achieved a significant positive effect on our general public.