

A PROJECT REPORT ON

INSTAGRAM USER ANALYTICS



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PROJECT DESCRIPTION

Purpose- To extract meaningful data from the given data about Instagram which will make the business to grow. This will help the product manager and team in enhancing features of the app, better marketing decisions and overall user experience.

In today's digitally connected world, few platforms have left a profound impact on the way we engage, share, and discover visual content. One of them is Instagram which has transformed a simple photo sharing app into a global cultural phenomenon.

APPROACH

- Created the database
- Inserted the given values in the database using SQL queries as given by the product manager using MySQL workbench
- Insights were extracted using MySQL by running SQL queries

TECH STACK USED

Used MySQL Workbench 8.0, Version 8.0.34 build 3263449 CE (64 bits) Community for my project as it is a free and open-source relational database management system that uses SQL.

INSIGHTS-MARKETING

1. **Rewarding the most Loyal Users-** The people who are using the platform for the longest time. Given are the 5 oldest users of Instagram from the database.

```
12 #1. users using the platform from longest time
13 #find the 5 oldest users
14 • select * from users;
15 • select username,created_at from users order by created_at limit 5;
16
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:
username	created_at				
Darby_Herzog	2016-05-06 00:14:21				
Emilio_Bernier52	2016-05-06 13:04:30				
Elenor88	2016-05-08 01:30:41				
Nicole71	2016-05-09 17:30:22				
Jordyn.Jacobson2	2016-05-14 07:56:26				

2. **Encouraging Inactive Users to Start Posting-** To identify who have not posted a single photo and send them promotional emails

```
17 #2.find the users who have never posted a single photo on instagram
18 • select * from photos,users;
19 • select * from users u left join photos p on p.user_id=u.id where p.image_url is null order by u.username;
20 • select u.username from users u left join photos p on p.user_id=u.id where p.image_url is null order by u.username;
21
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
username				
Aniya_Hackett				
Bartholome.Bernhard				
Bethany20				
Darby_Herzog				
David.Osinski47				
Duane60				
Esmeralda.Mraz57				
Esther.Zulauf61				
Franco_Keebler64				
Hulda.Macejkovic				
Jaclyn81				
Janelle.Nikolaus81				
Jessyca_West				
Julien_Schmidt				
Kasandra_Homenick				
Leslie67				
Linnea59				
Maxwell.Halvorson				
Mckenna17				
...				

3. **Declaring the Contest Winner-** A contest was started by the team. The user who will get most likes on a single photo will win the contest. Zack_Kemmer93 won the contest with 48 number of likes.

```
22  3. find out the winner of the contest
23  • select * from likes,photos,users;
24  • select likes.photo_id,users.username,count(likes.user_id) as nooflikes
25  from likes inner join photos on likes.photo_id=photos.id
26  inner join users on photos.user_id=users.id group by
27  likes.photo_id,users.username order by nooflikes desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	photo_id	username	nooflikes
▶	145	Zack_Kemmer93	48
	127	Malinda_Streich	43
	182	Adelle96	43
	123	Seth46	42
	30	Presley_McClure	41
	52	Annalise.McKenzie16	41
	61	Delpha.Kihn	41
	147	Meggie_Doyle	41
	174	Elenor88	41
	192	Kathryn80	41
	256	Javonte83	41
	13	Harley_Lind18	40
	97	Irwin.Larson	40
	153	Aurelie71	40
	161	Cesar93	40
	244	Damon35	40
	44	Alison_du25	38

Result 25 x

4. **Hashtags Used in the Platform-** This will help the partner brand in reaching the most number of people

```
29  #4. identify and suggest the top 5 most commonly used hashtags on the platform
30  • select * from photo_tags,tags;
31  • select t.tag_name,count(p.photo_id) as ht from photo_tags p inner join tags t on t.id=p.tag_id group by t.tag_name order by ht desc limit 5;
32
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |

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

5. **Ad Campaign Launch-** The day on which most users registered will help in launching the ad campaign. Thursday and Sunday were found to be the days of most registration.

```
33 #5 what day of the week do most users register on? provide insights on when to schedule an ad campaign
34 • select * from users;
35 • select date_format((created_at), '%W') as dayy, count(username) from users group by 1 order by 2 desc;
36
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
dayy	count(username)			
Thursday	16			
Sunday	16			
Friday	15			
Tuesday	14			
Monday	14			
Wednesday	13			
Saturday	12			

INSIGHTS-INVESTOR METRICS

6. **User Engagement-** Investors wants the information about the active users and the average number of posts

```
37 #6. Provide how many times does average userposts on Instagram. also providethe total number of photos on Instagram/ total number of users
38 • select * from photos;
39 • with base as(
40   select u.id as userid, count(p.id) as photoid from users u left join photos p on p.user_id=u.id group by u.id)
41   select sum(photoid) as totalphotos, count(userid) as total_users, sum(photoid)/count(userid) as photoperuser
42   from base;
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
totalphotos	total_users	photoperuser			
257	100	2.5700			

7. **Bots and Fake Accounts-** Investors wants to know about the platform if it is crowded with fake and dummy accounts. Given the data of fake likes

```
44 #7. Give data about users(bots) who have liked every single photo on the site( since any normal user would not be able to do this)
45 select * from users,likes;
46 with base as(
47     select u.username,count(l.photo_id) as likess from likes l inner join users u on u.id=l.user_id group by u.username)
48 select username,likess from base where likess=(select count(*) from photos) order by username;
49
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
username	likess			
Aniya_Hackett	257			
Bethany20	257			
Duane60	257			
Jaclyn81	257			
Janelle.Nikolaus81	257			
Julien_Schmidt	257			
Leslie67	257			
Maxwell.Halvorson	257			
Mckenna17	257			
Mike.Auer39	257			
Nia_Haag	257			
Ollie_Ledner37	257			
Rocio33	257			

RESULTS

- Marketing team can create more such contests for the active involvement and engagement of users
- The bots and fake accounts should be removed and checked from time to time. This will create the trust of investors
- Thursday and Sunday can be good day to create contest for high participation of users
- Promotional emails should be sent to inactive users and associated rewards for reaching milestones should be mentioned