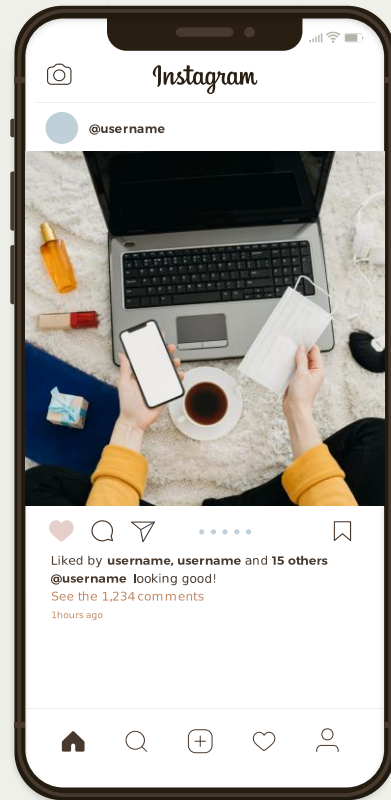


# INSTAGRAM USER ANALYTICS

By – Ankita Yadav



# User Analysis

User analysis is the process in which data is collected and interpreted in order to understand how users are interacting with the digital product and draw useful insights for marketing and developments.



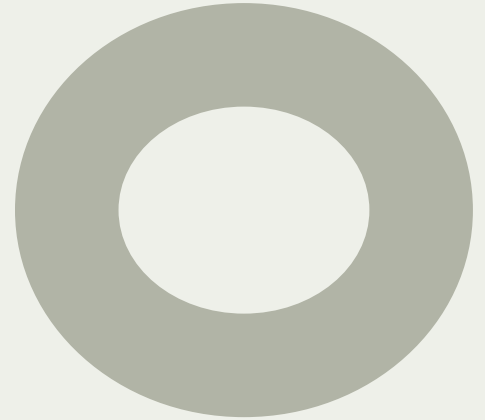
**Projects  
Description**

**Approach**

**Tech -Stacks  
used**

**Insights**

**Results**





# Project **Description**



This project is about Instagram User Analytics where I have tried to draw some business insights to help with Marketing and Investors metrics.

In this project I will be using SQL (Structured Query Language) to derive the useful insights to answer the questions asked by the management team.

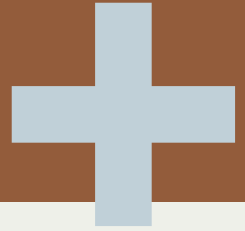


# Approach

My approach for this project is to understand the data Thoroughly that is provided by the management team and find out the required information from the data for the team.

In order to draw insights have imported the data into the SQL schema and used different queries to study the data and answer the questions to draw the insights for the marketing and investors metrics.

# Tech-Stack Used



## DB Fiddle

I have used MySQL v8.0 to study the database run my queries to draw the insights.

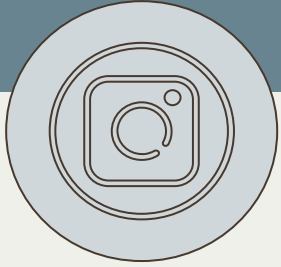


## Microsoft PowerPoint

I have used Microsoft PowerPoint 2019 to prepare and present the report on my work.



# Insights



While working for this project I have got to learn about the various query used to manage a database. I gained a deep understanding of various SQL commands(like DML, DDL, DCL) and its operations.

I developed an understanding on how to read the database and how the queries are used to draw insights from database.

I have performed various operations to answer the questions that were asked in the project and have successfully drawn the insights.

# Marketing



# 1) Rewarding Most Loyal User

- **Task**– Find the 5 oldest users of the Instagram from the database provided.
- **Result** - Top 5 most loyal users were discovered who are on Instagram since long along with there date of joining.

```
1 ##Rewarding most loyal user
2
3 SELECT
4 username,
5 id,
6 created_at
7 FROM
8 ig_clone.users
9 ORDER BY
10 created_at
```

Results

Query #1 Execution time: 1ms

username	id	created_at
Darby_Herzog	80	2016-05-06 00:14:21
Emilio_Bernier52	67	2016-05-06 13:04:30
Elenor88	63	2016-05-08 01:30:41
Nicole71	95	2016-05-09 17:30:22
Jordyn.Jacobson2	38	2016-05-14 07:56:26



## 2) Remind Inactive Users To Start Posting

- **Task** – Find the users who have never posted a single photo on Instagram
- **RESULT**– Found the list of users who are most inactive and haven't posted on Instagram

```
13
14 ##Reminding inactive users to start posting
15
16 SELECT
17 username
18 FROM
19 ig_clone.users
20 LEFT JOIN
21 ig_clone.photos
22 ON
23 users.id=photos.user_id
24 WHERE
25 photos.user_id is null
26 ORDER BY
27 username ;
28
```

Query #2 Execution time: 1ms	Hulda.Macejkovic	Mike.Auer39
username	Jaclyn81	Morgan.Kassulke
Aniya_Hackett	Janelle.Nikolaus81	Nia_Haag
Bartholome.Bernhard	Jessyca_West	Ollie_Ledner37
Bethany20	Julien_Schmidt	Pearl7
Darby_Herzog	Kassandra_Homenick	Rocio33
David.Osinski47	Leslie67	Tierra.Trantow
Duane60	Linnea59	
Esmeralda.Mraz57	Maxwell.Halvorson	
Esther.Zulauf61	Mckenna17	
Franco_Keebler64	Mike.Auer39	

### 3) Declaring Contest Winner

- **Task** – Identify the winner of the contest and provide their details to the team.
- **RESULT**- Found the details of the user who has liked most number of photos on the Instagram

```
20
21 ##Declaring Contest Winner
22
23 SELECT
24 username, photo_id, count(likes.user_id) as t_likes
25 FROM
26 ig_clone.likes
27 JOIN
28 ig_clone.photos
29 ON
30 likes.photo_id=photos.id
31 JOIN
32 ig_clone.users
33 ON
34 photos.user_id=users.id
35 GROUP BY
36 likes.photo_id, users.username
37 ORDER BY
38 t_likes DESC
39 limit 1;
```

Query #3 Execution time: 23ms

username	photo_id	t_likes
Zack_Kemmer93	145	48

## 4) Hashtag Researching

- **TASK** – Identify and suggest the top 5 most commonly used hashtags on the platform.
- **RESULT** - Found the list of most commonly used Instagram hashtags.

```
49 #Hashtag Researching
50
51 SELECT
52 tag_id,
53 tag_name,
54 COUNT(*) AS tagcount
55 FROM
56 ig_clone.photo_tags
57 JOIN
58 ig_clone.tags
59 ON
60 photo_tags.tag_id=tags.id
61 GROUP BY
62 tag_name
63 ORDER BY
64 tagcount DESC
65 LIMIT 5;
66
```

Query #4 Execution time: 1ms

tag_id	tag_name	tagcount
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24

## 5) Launch AD Campaign

- **TASK** - What day of the week do most users register on? Provide insights on when to schedule an ad campaign.
- **RESULT** – Found the weekdays when most Instagram users registered.

```
bb
67 ##Luanch AD Campaign
68
69 SELECT
70 id, username, created_at,
71 DAYNAME(created_at) AS Weekday,
72 COUNT(*) AS totalcount
73 FROM
74 ig_clone.users
75 GROUP BY
76 1
77 ORDER BY
78 2 DESC;
79
```

Query #5 Execution time: 2ms

id	username	created_at	Weekday	totalcount
52	Zack_Kemmer93	2017-01-01 05:58:22	Sunday	1
33	Yvette.Gottlieb91	2016-11-14 12:32:01	Monday	1
37	Yazmin_Mills95	2016-07-27 00:56:44	Wednesday	1
93	Willie_Leuschke	2017-02-15 01:40:53	Wednesday	1
6	Travon.Waters	2017-04-30 13:26:14	Sunday	1
97	Tomas.Beatty93	2017-02-11 11:38:55	Saturday	1
25	Tierra.Trantow	2016-10-03 12:49:21	Monday	1
8	Tabitha_Schamberger11	2016-08-20 02:19:46	Saturday	1
44	Seth46	2016-07-07 11:40:27	Thursday	1
60	Sam52	2017-03-30 22:03:45	Thursday	1

# Investors **Metric**



# 1) USER ENGAGEMENT

- **TASK** – Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users
- **RESULT** – Found the average number of posts posted on Instagram.

```
81 ##User Engagement
82
83 WITH CTE AS
84 (
85     SELECT
86         users.id AS u_id,
87         COUNT(photos.id) AS p_id
88     FROM
89         ig_clone.users
90     LEFT JOIN
91         ig_clone.photos
92     ON
93         users.id=photos.user_id
94     GROUP BY
95         users.id
96 )
97 SELECT SUM(p_id)/ COUNT(u_id)
98 FROM CTE
99 WHERE
100 p_id > 0
```

Query #6

Execution time: 1ms

$SUM(p\_id) / COUNT(u\_id)$

3.4730

## 2) BOTS & FAKE ACCOUNT

- **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).
- **RESULT** – Found the list of fake accounts and bots who have liked every single photo on instagram .

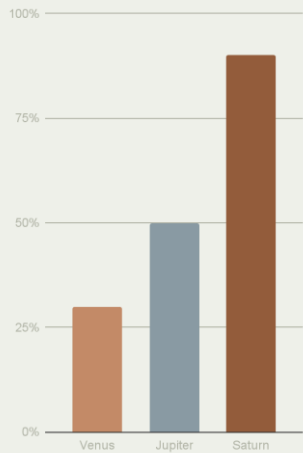
```
--  
86 ##BOTS AND FAKE ACCOUNT  
87 SELECT  
88 username,  
89 COUNT(*) AS num_likes  
90 FROM ig_clone.users  
91 INNER JOIN ig_clone.likes  
92 ON users.id = likes.user_id  
93 GROUP BY likes.user_id  
94 HAVING num_likes= (SELECT COUNT(*) FROM ig_clone.photos)  
95
```

Query #6 Execution time: 3ms

username	num_likes
Aniya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257
Duane60	257
Julien_Schmidt	257
Mike.Auer39	257

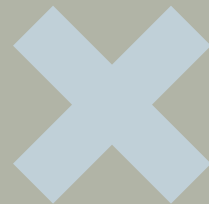


# Conclusion



This project has helped in deep understanding of some of the concepts of data analysis using SQL.

I learnt how to deal with the various SQL commands and other operation in order to draw wishful insights for the need of business and other purpose.







Thanks!