INSTAGRAM ANALYSIS:

**Project Description:**

Here we have done Instagram data analysis. Done all the task mentioned by the authorities. The tasks gave us some beneficial insights. 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:**

Performed all of the task given using SQL. Created all the tables and data base as mentioned in the dataset provided.

**Tech-Stack Used:** Mysql server only

SQL CODES:

mysql> create database ig\_clone;

Query OK, 1 row affected (0.00 sec)

mysql> use ig\_clone;

Database changed

mysql> show tables;

+--------------------+

**| Tables\_in\_ig\_clone |**

+--------------------+

| comments |

| follows |

| likes |

| photo\_tags |

| photos |

| tags |

| users |

+--------------------+

7 rows in set (0.01 sec)

**mysql> desc users;**

+------------+--------------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+------------+--------------+------+-----+-------------------+-------------------+

| id | int | NO | PRI | NULL | auto\_increment |

| username | varchar(255) | NO | | NULL | |

| created\_at | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+------------+--------------+------+-----+-------------------+-------------------+

3 rows in set (0.00 sec)

**mysql> desc photos;**

+-------------+--------------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+-------------------+-------------------+

| id | int | NO | PRI | NULL | auto\_increment |

| image\_url | varchar(355) | NO | | NULL | |

| user\_id | int | NO | MUL | NULL | |

| created\_dat | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+-------------+--------------+------+-----+-------------------+-------------------+

4 rows in set (0.00 sec)

**mysql> desc comments;**

+--------------+--------------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+-------------------+-------------------+

| id | int | NO | PRI | NULL | auto\_increment |

| comment\_text | varchar(255) | NO | | NULL | |

| user\_id | int | NO | MUL | NULL | |

| photo\_id | int | NO | MUL | NULL | |

| created\_at | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+--------------+--------------+------+-----+-------------------+-------------------+

5 rows in set (0.00 sec)

**mysql> desc likes;**

+------------+-----------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+------------+-----------+------+-----+-------------------+-------------------+

| user\_id | int | NO | PRI | NULL | |

| photo\_id | int | NO | PRI | NULL | |

| created\_at | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+------------+-----------+------+-----+-------------------+-------------------+

3 rows in set (0.00 sec)

**mysql> desc follows;**

+-------------+-----------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+-------------+-----------+------+-----+-------------------+-------------------+

| follower\_id | int | NO | PRI | NULL | |

| followee\_id | int | NO | PRI | NULL | |

| created\_at | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+-------------+-----------+------+-----+-------------------+-------------------+

3 rows in set (0.00 sec)

**mysql> desc tags;**

+------------+--------------+------+-----+-------------------+-------------------+

| Field | Type | Null | Key | Default | Extra |

+------------+--------------+------+-----+-------------------+-------------------+

| id | int | NO | PRI | NULL | auto\_increment |

| tag\_name | varchar(255) | NO | UNI | NULL | |

| created\_at | timestamp | YES | | CURRENT\_TIMESTAMP | DEFAULT\_GENERATED |

+------------+--------------+------+-----+-------------------+-------------------+

3 rows in set (0.00 sec)

**mysql> desc photo\_tags;**

+----------+------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------+------+------+-----+---------+-------+

| photo\_id | int | NO | PRI | NULL | |

| tag\_id | int | NO | PRI | NULL | |

+----------+------+------+-----+---------+-------+

2 rows in set (0.00 sec)

QUESTIONS:

**Marketing:** Task: Find the 5 oldest users of the Instagram from the database provided?

mysql> SELECT USERNAME,CREATED\_AT FROM USERS

-> ORDER BY CREATED\_AT

-> LIMIT 5;

+------------------+---------------------+

| 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 |

+------------------+---------------------+

5 rows in set (0.00 sec)

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

mysql> SELECT DISTINCT USER\_ID FROM PHOTOS

-> ORDER BY USER\_ID;

+---------+

| USER\_ID |

+---------+

| 1 |

| 2 |

| 3 |

| 4 |

| 6 |

| 8 |

| 9 |

| 10 |

| 11 |

| 12 |

| 13 |

| 15 |

| 16 |

| 17 |

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| 85 |

| 86 |

| 87 |

| 88 |

| 92 |

| 93 |

| 94 |

| 95 |

| 96 |

| 97 |

| 98 |

| 99 |

| 100 |

+---------+

74 rows in set (0.00 sec)

5,7,14, 21,24,25,34,36,41,45,49, 53,54.57, 66,68,71,74.75,76,80,81,83,89,90,91

After selecting all the ids who posted we can omit out the ids never posted just like I I did and send them msg to post.

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

mysql> select photo\_id ,max(user\_id) as likes\_count from likes

-> group by photo\_id

-> order by likes\_count desc

-> limit 1;

+----------+-------------+

| photo\_id | likes\_count |

+----------+-------------+

3 | 100 |

+----------+-------------+

1 row in set (0.00 sec)

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

mysql> select distinct tag\_id from photo\_tags

-> order by tag\_id desc

-> limit 5;

+--------+

| tag\_id |

+--------+

| 21 |

| 20 |

| 19 |

| 18 |

| 17 |

+--------+

5 rows in set (0.00 sec)

Tag\_id can then compare with name of tags.

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

mysql> select created\_at from users

-> order by created\_at desc

-> limit 5;

+---------------------+

| created\_at |

+---------------------+

| 2017-05-04 16:32:16 |

| 2017-04-30 13:26:14 |

| 2017-04-30 07:50:51 |

| 2017-04-29 18:53:40 |

| 2017-04-18 02:32:44 |

+---------------------+

5 rows in set (0.00 sec)

We can see these top 5 dates in which max users registered and from there calculate the weekday and launch add campaign on those days.

**Investor Metrics:**

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

mysql> select user\_id,count(user\_id) from photos

-> group by user\_id

-> order by count(user\_id) desc;

+---------+----------------+

| user\_id | count(user\_id) |

+---------+----------------+

| 23 | 12 |

| 88 | 11 |

| 59 | 10 |

| 86 | 9 |

| 58 | 8 |

| 29 | 8 |

| 77 | 6 |

| 33 | 5 |

| 52 | 5 |

| 47 | 5 |

| 6 | 5 |

| 13 | 5 |

| 51 | 5 |

| 78 | 5 |

| 11 | 5 |

| 1 | 5 |

| 72 | 5 |

| 65 | 5 |

| 43 | 5 |

| 64 | 5 |

| 26 | 5 |

| 2 | 4 |

| 3 | 4 |

| 9 | 4 |

| 8 | 4 |

| 46 | 4 |

| 12 | 4 |

| 44 | 4 |

| 63 | 4 |

| 32 | 4 |

| 28 | 4 |

| 16 | 4 |

| 15 | 4 |

| 87 | 4 |

| 4 | 3 |

| 10 | 3 |

| 50 | 3 |

| 67 | 3 |

| 17 | 3 |

| 42 | 3 |

| 92 | 3 |

| 96 | 3 |

| 99 | 3 |

| 38 | 2 |

| 100 | 2 |

| 82 | 2 |

| 84 | 2 |

| 85 | 2 |

| 60 | 2 |

| 62 | 2 |

| 19 | 2 |

| 93 | 2 |

| 95 | 2 |

| 30 | 2 |

| 97 | 2 |

| 35 | 2 |

| 31 | 1 |

| 27 | 1 |

| 79 | 1 |

| 40 | 1 |

| 61 | 1 |

| 39 | 1 |

| 22 | 1 |

| 20 | 1 |

| 48 | 1 |

| 18 | 1 |

| 37 | 1 |

| 94 | 1 |

| 69 | 1 |

| 70 | 1 |

| 55 | 1 |

| 98 | 1 |

| 56 | 1 |

| 73 | 1 |

+---------+----------------+

74 rows in set (0.00 sec)

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).

mysql> select photo\_id, user\_id from likes

-> where user\_id = photo\_id;

+----------+---------+

| photo\_id | user\_id |

+----------+---------+

| 4 | 4 |

| 5 | 5 |

| 10 | 10 |

| 12 | 12 |

| 13 | 13 |

| 14 | 14 |

| 15 | 15 |

| 18 | 18 |

| 20 | 20 |

| 21 | 21 |

| 22 | 22 |

| 24 | 24 |

| 26 | 26 |

| 30 | 30 |

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| 57 | 57 |

| 62 | 62 |

| 66 | 66 |

| 67 | 67 |

| 71 | 71 |

| 75 | 75 |

| 76 | 76 |

| 79 | 79 |

| 91 | 91 |

| 93 | 93 |

+----------+---------+

38 rows in set (0.00 sec)

The above mentioned our bots

**Insights:**

Wider approach of what we are supposed to do in industry .Getting prepared for the actual work. We have seen id’s of bots ,actual people who comments more on Instagram.

Weeks most people registered on Instagram for the first time.

Oldest user we have with ourselves from a long time.

Users who have not posted a single photo till now and many more insights which can help us to increase our business in a long run.

**Result:**

We got many insights in this project. 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 END