PROJECT 2

INSTAGRAM USER ANALYTICS

INTRODUCTION

Instagram is a popular social media platform that allows users to share photos and videos, connect with friends and family. It's a platform widely used for personal expression, connecting with friends, following interests, and for businesses to promote their products and services.

IMPORTANCE OF USING INSTAGRAM ANALYTICS

- Enhancing customer satisfaction
- Increasing sales
- Increasing brand awareness
- Increasing engagement
- Increasing traffic to client’s website
- Building relationships with customers and clients

DESCRIPTION

This project will focus on gathering and analyzing Instagram user data to provide valuable insights for individuals and businesses looking to optimize their Instagram presence.

APPROACH

DATA COLLECTION
Gathered data via the data set provided

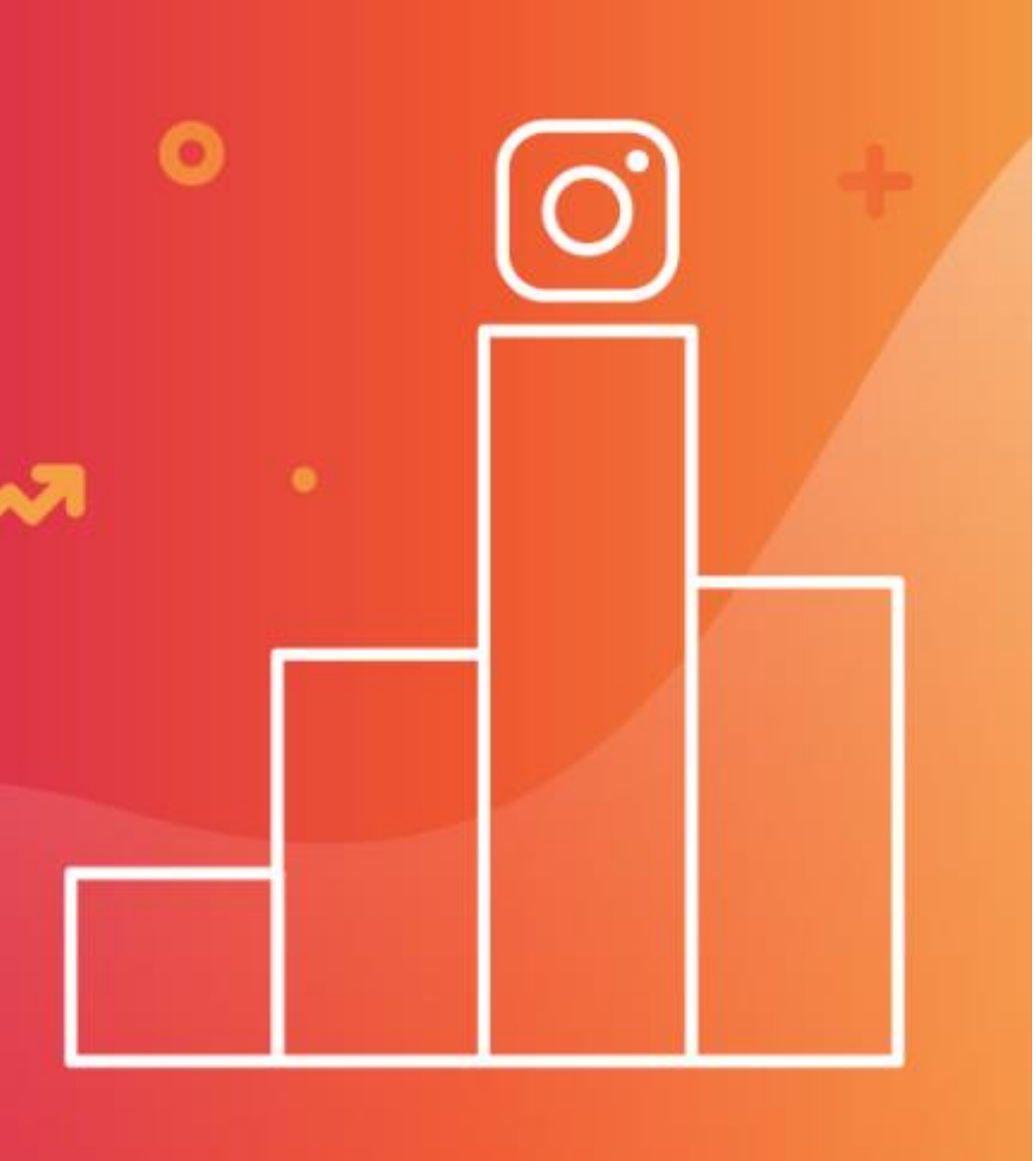
DATA ANALYSIS
Gaining insights from the data (i.e. account created , total posts , likes and hashtag used etc)

DATA RETRIEVAL
As per the questions provided , retrieved the data needed through the sql queries

TECH STACK USED

MYSQL COMMUNITY EDITION

- Free to use
- Good speed and performance
- Deals with data stored in the form of tables
- Compatible with programming languages
- Reliable
- Can handle wide range of data



INSTAGRAM INSIGHTS

- Total users
- Total posts
- Average posts by a user
- Total likes on a post
- Comments on a post
- Popular hashtags

MARKETING ANALYSIS

1. Identify the five oldest users on Instagram from the provided database

```
#1
select * from users order by created_at asc limit 5;
```

Result Grid | Filter Rows: | Ed

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. Identify users who have never posted a single photo on Instagram.


```sql
#2
select users.id ,username,count(image_url)
from users left join photos
on users.id = photos.user_id
where image_url is NULL group by users.id,username ;
```

id	username	count(image_url)
5	Aniya_Hackett	0
7	Kasandra_Homenick	0
14	Jadyn81	0
21	Rocio33	0
24	Maxwell.Halvorson	0
25	Tierra.Trantow	0
34	Pearl7	0
36	Ollie_Ledner37	0
41	Mckenna17	0
45	David.Osinski47	0
49	Morgan.Kassulke	0
53	Linnea59	0
54	Duane60	0
57	Julien_Schmidt	0
66	Mike.Auer39	0
68	Franco_Keebler64	0
71	Nia_Haag	0
74	Hulda.Macejkovic	0
75	Leslie67	0
76	Janelle.Nikolaus81	0

id	username	count(image_url)
76	Janelle.Nikolaus81	0
80	Darby_Herzog	0
81	Esther.Zulauf61	0
83	Bartholome.Bernhard	0
89	Jessyca_West	0
90	Esmeralda.Mraz57	0
91	Bethany20	0

3. Determine the winner of the contest of most liked post and provide their details to the team.

If we want only 1 winner -

```
#3
select username , photos.id , photos.image_url , count(likes.user_id) as total
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 desc limit 1;
```

Result Grid | Filter Rows: | Export:

username	id	image_url	total
Zack_Kemmer93	145	https://jarret.name	48

3. Determine the winner of the contest of most liked post and provide their details to the team.

If we want 3 winners, 2 of them have same no. likes so we give them equal position and rewards and find 4 winners in total for 3 positions -

```
select username , photos.id , photos.image_url , count(likes.user_id) as total
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 desc limit 4;
```

Result Grid | Filter Rows: | Export:

username	id	image_url	total
Zack_Kemmer93	145	https://jarret.name	48
Adelle96	182	https://dorcas.biz	43
Malinda_Streich	127	https://celestine.name	43
Seth46	123	http://shannon.org	42

4. Identify and suggest the top five most commonly used hashtags on the platform.

```
#4
select tags.tag_name , count(*) as totalusage
from photo_tags join tags
on tags.id = photo_tags.tag_id group by tags.id
order by  totalusage desc limit 5;
```

Result Grid | Filter Rows:

tag_name	totalusage
smile	59
beach	42
party	39
fun	38
concert	24

5. Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign

Limit of 2 has been used here because there is an equal no. of user registrations on 2 days.

```sql
#5
select dayname(created_at) as day, count(*) as total_users
from users
group by day
order by total_users desc limit 2;
```

Result Grid | Filter Rows:

day	total_users
Thursday	16
Sunday	16

INVESTOR METRICS

1. Calculate the average number of posts per user on Instagram. Also, provide the total number of photos on Instagram divided by the total number of users.

```sql
#6
select avg(photo_count) as avg_photos_posted
from(
    select users.id, count(photos.id) as photo_count
    from users
    left join photos on users.id = photos.user_id
    group by users.id
) as subquery;
```

Result Grid | Filter Rows:

avg_photos_posted
2.5700

2. Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

```
#7
select users.username,count(*) as num_of_likes
from users join likes on users.id = likes.user_id
group by users.id having num_of_likes = (select count(*)from photos);
```

Result Grid | Filter Rows:

username	num_of_likes
Aniya_Hackett	257
Jadyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257
Duane60	257
Julien_Schmidt	257
Mike.Auer39	257
Nia_Haag	257
Leslie67	257
Janelle.Nikolaus81	257
Bethany20	257

RESULT

- ***The 5 oldest instagram users*** – historical / demographical insight
- ***Users with 0 posts*** – the users who consume content yet don’t contribute in posting
- ***The user with the max no. of likes on a post*** – it tells the type of content gets the most engagement
- ***Most popular hashtags –*** it reveals the trending topics and interests within the Instagram community
- ***Most registrations on the days –*** platform growth trends
- ***Average posts by a user -*** help in understanding user behavior and engagement levels
- ***Bots –*** Detecting potential bot accounts can improve the quality of user data and content engagement