Instagram User Analytics Project :

The Business team wants to launch some campaigns, firstly they need to understand customer /user engagement with the Instagram platform. To understand this they have approached the data analyst team to track down users experience and the app effectivness.

Tool : MySQL Workbench

This case study is mainly divided into two parts:
1. **Marketing** - To launch campaigns we need to understand user behavior with the app. Giving rewards to the most loyal users, sending promotional emails to the inactive users and what are the most commonly used hashtags and which user got the most likes.

 # Find the 5 oldest users of the Instagram from the database provided

- The query gives the details for 5 most loyal users who are using the platform for a very long time.

Query	Result
select * from users order by created_at limit 5;	+ ------- + ------------- + --------------- + | 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 |

 # Find the users who have never posted a single photo on Instagram

- This query helps to understand the inactive users who have never posted the single photo for such users business can send promotional emails to increase the users interactivity with the app.

Query	Result
select users.username from users left join photos on users.id = photos.user_id where photos.id is null;	+ ---------- + | username | + ---------- + | Aniya_Hackett | | Kasandra_Homenick | | Jaclyn81 | | Rocio33 | | Maxwell.Halvorson | | Tierra.Trantow | | Pearl7 | | Ollie_Ledner37 | | Mckenna17 | | David.Osinski47 | | Morgan.Kassulke | | Linnea59 | | Duane60 | | Julien_Schmidt | | Mike.Auer39 | | Franco_Keebler64 | | Nia_Haag | | Hulda.Macejkovic | | Leslie67 | | Janelle.Nikolaus81 | | Darby_Herzog | | Esther.Zulauf61 | | Bartholome.Bernhard | | Jessyca_West | | Esmeralda.Mraz57 | | Bethany20 | + ---------- +

 # Identify the winner of the contest and provide their details to the team

- This is another great way to increase the user interaction with the app by organizing different contests to grab the attraction of users. This query gives the winner details who gets the most likes on the single photo. Zack Kemmer is the winner who got 48 likes on photo_id 145.

Query	Result

select photos.id, photos.image_url,
username, count(*) as totalLikes
from photos
join likes
  on likes.photo_id = photos.id
join users
  on users.id = photos.user_id
group by photos.id
order by totalLikes desc
limit 1;
	+ ------- + -------------- + ------------- + --------------- +
	| id | image_url | username | totalLikes |
	+ ------- + -------------- + ------------- + --------------- +
	| 145 | https://jarret.name | Zack_Kemmer93 | 48
	|
	+ ------- + -------------- + ------------- + --------------- +

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

- Below query gives the list of most commonly used hashtags on the Instagram platform. These results can help when a partner brand wants to launch campaigns with related tags.

Query	Result
select tags.tag_name, Count(tag_name) as TagsCount from photo_tags join tags on tags.id = photo_tags.tag_id group by tag_id order by TagsCount desc limit 5;	+ ------------- + ------------- + | tag_name | TagsCount | + ------------- + ------------- + | smile | 59 | | beach | 42 | | party | 39 | | fun | 38 | | concert | 24 | + ------------- + ------------- +

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

- Thursday and Sunday are the best days to launch new campaigns as most users are registered on these days.

Query	Result
select dayname(created_at) as dayName, count(*) as RegistredIds from users group by dayName order by RegistredIds desc;	+ ------------ + ----------------- + | dayName | RegistredIds | + ------------ + ----------------- + | Thursday | 16 | | Sunday | 16 | | Friday | 15 | | Tuesday | 14 | | Monday | 14 | | Wednesday | 13 | | Saturday | 12 | + ------------ + ----------------- +

2. Investor Metrics

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

- This query gives the insights on average times users post on instagram, total photos count and total users count.

Query	Result
select (select count(*) from photos) as totalPhotos, (select count(*) from users) as totalUsers, round((select count(*) from photos)/(select count(*) from users),2) as AvgUserPost;	+ ---------- + ---------- + ---------- + | totalPhotos | totalUsers | AvgUserPost | + ---------- + ---------- + ---------- + | 257 | 100 | 2.57 | + ---------- + ---------- + ---------- +

 # 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).

- If the platform is crowded with fake and dummy accounts this will mislead the data and for business growth having quality data is must. Below query gives the list of user details who might have created a fake account.

Query	Result
select users.id, users.username, count(users.id) as totalLikes from users join likes on likes.user_id = users.id group by users.id having totalLikes = (select count(*) from photos);	+ ------- + ------------- + --------------- + | id | username | totalLikes | + ------- + ------------- + --------------- + | 5 | Aniya_Hackett | 257 | | 14 | Jaclyn81 | 257 | | 21 | Rocio33 | 257 | | 24 | Maxwell.Halvorson | 257 | | 36 | Ollie_Ledner37 | 257 | | 41 | Mckenna17 | 257 | | 54 | Duane60 | 257 | | 57 | Julien_Schmidt | 257 | | 66 | Mike.Auer39 | 257 | | 71 | Nia_Haag | 257 | | 75 | Leslie67 | 257 | | 76 | Janelle.Nikolaus81 | 257 | | 91 | Bethany20 | 257 | + ------- + ------------- + --------------- +