Instagram User Analytics

SQL Fundamentals

Project Description:

This project helps to analyse the data related to Instagram performance which can range from very basic to very specific analysis to create useful insights. Instagram analytics are tools allows us to see and extract useful insights and also visualize them. This way it helps to increase efficiency of platform.

Project Approach:

In order to execute the project, SQL was used. SQL queries were used to create a database using the raw data provided. Once the database was created, various sorting and data extracting queries were done to get the required insights.

Tech Stack Used:

MySQL Workbench v8.0.32.0 was used while working on a project in order to query the database. The ease of access and setup, troubleshooting support as well as the GUI made it a good tool for the project.

Project Insights:

(A) Marketing:

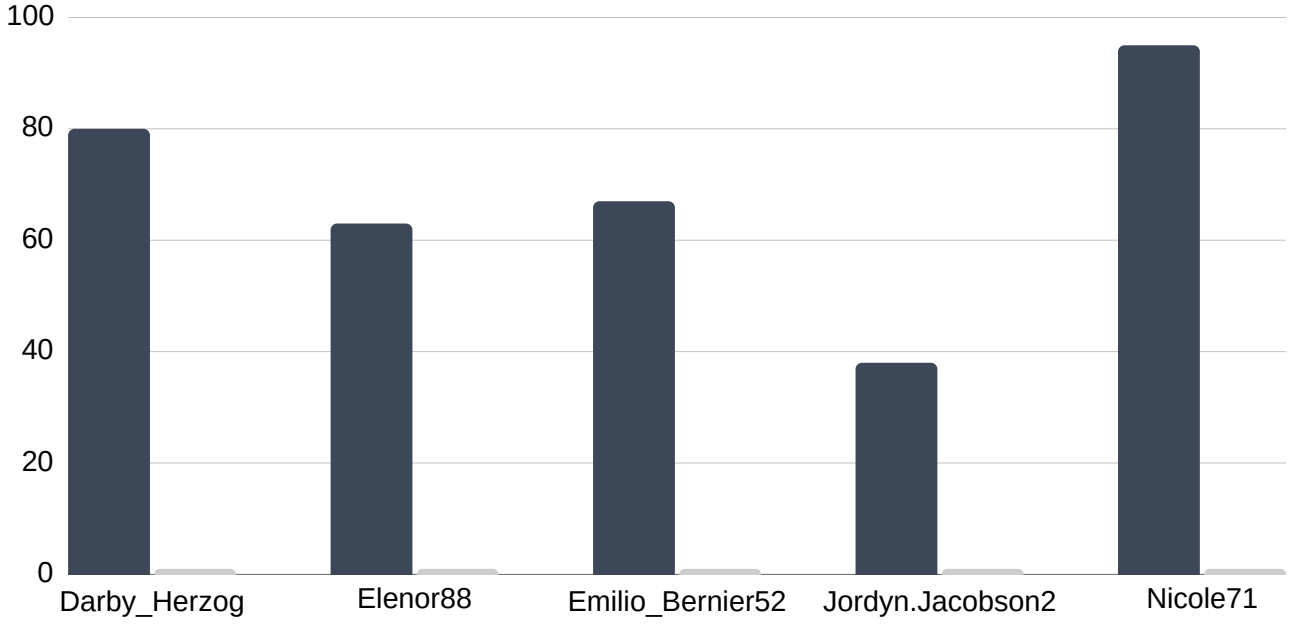
The metrics range from simple numbers like ‘the average number of posts per day’ through to complex metrics, like the ‘average number of likes posted on images using the brand’s primary hashtag’. And providing the interpretation requires the understanding what it all means. The objective of providing a brand with accurate information that can help every eCommerce or Social Media manager refine their marketing strategy.

Using advanced Instagram analytics tools, can gain required insights into developing a Instagram Marketing Strategies.

1.Rewarding Most Loyal Users: People who have been using the platform for the longest time.

QUERY: 5 oldest users of the Instagram from the database provided.

```
SELECT *FROM users
ORDER BY created_at ASC
LIMIT 5;
```

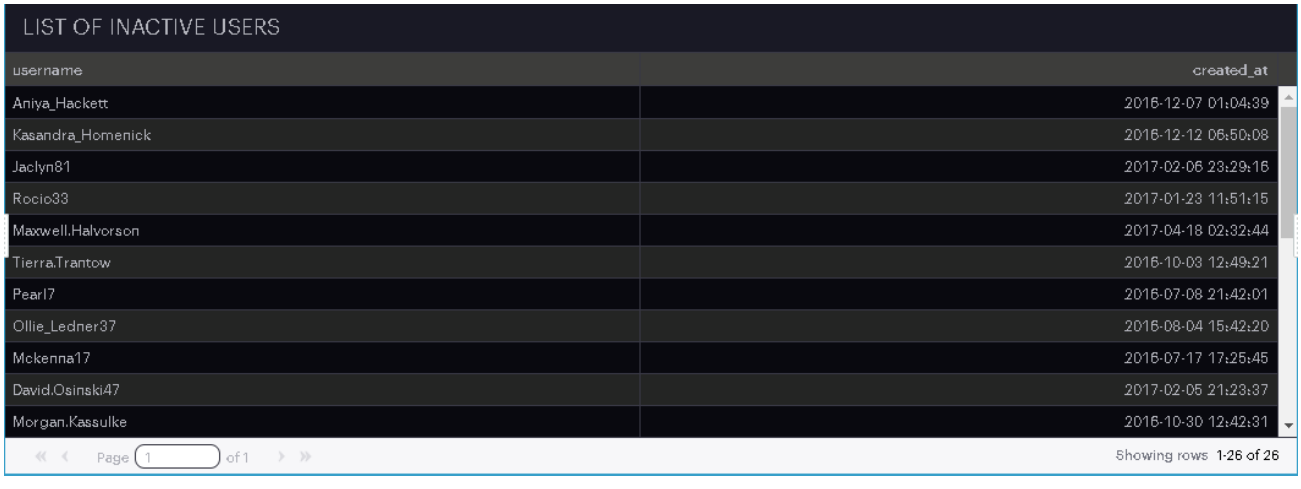


CONCLUSION: Users 80, 63, 67, 38, 95 are the 5 oldest users on the platform.

2.Remind Inactive Users to Start Posting: By sending them promotional emails to post their 1st photo.

QUERY: Users who have never posted a single photo on Instagram.

```
SELECT
 username, created_at
FROM
  users
  LEFT JOIN photos ON users.id = photos.user_id
WHERE
  photos.id IS NULL;
```



LIST OF INACTIVE USERS

username	created_at
Aniya_Hackett	2016-12-07 01:04:39
Kasandra_Homenick	2016-12-12 06:50:08
Jaclyn81	2017-02-06 23:29:16
Rocio33	2017-01-23 11:51:15
Maxwell.Halvorson	2017-04-18 02:32:44
Tierra.Trantow	2016-10-03 12:49:21
Pearl7	2016-07-08 21:42:01
Ollie_Ledner37	2016-08-04 15:42:20
Mckenna17	2016-07-17 17:25:45
David.Osinski47	2017-02-05 21:23:37
Morgan.Kassulke	2016-10-30 12:42:31

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CONCLUSION: From the above figure 26 users are the inactive users who have never posted a single photo.

3.Declaring Contest Winner: The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner.

QUERY: The winner of the contest and provide their details to the team.

```
SELECT
  users.username,
  photos.id,
  photos.image_url,
  COUNT(*) AS Total_Likes
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_Likes DESC
LIMIT 1;
```

WINNER OF THE CONTEST

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

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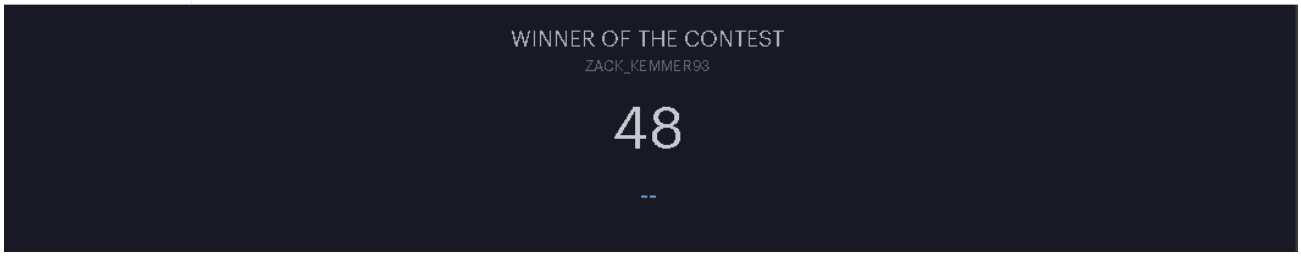
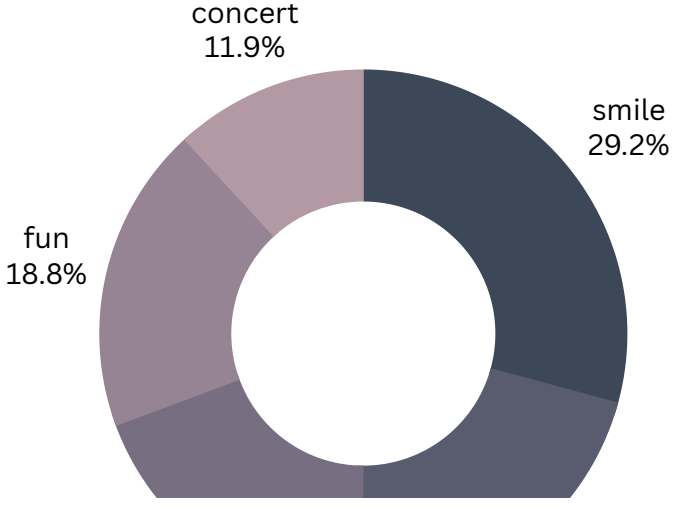


CONCLUSION: Username Zack_Kemmer93, Id 145 with Total likes of 48 is the winner of the contest.

4.Hashtag Researching: A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.

QUERY: The top 5 most commonly used hashtags on the platform.

```
SELECT tag_name, COUNT(tag_name) AS hashtag_count
FROM tags
JOIN photo_tags ON tags.id = photo_tags.tag_id
GROUP BY tags.id
ORDER BY hashtag_count DESC
LIMIT 5;
```

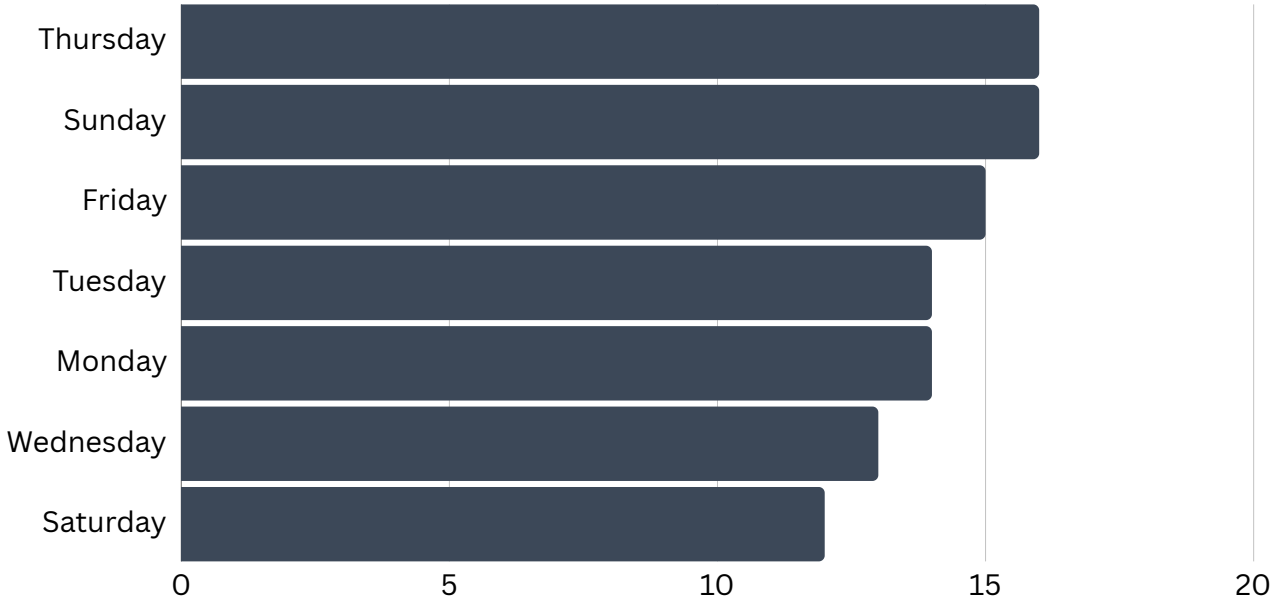


CONCLUSION: From the analysis #beach, #concert, #fun, #party and #smile are the top 5 hashtags that are used by the users most.

5.Launch AD Campaign: The team wants to know, which day would be the best day to launch Ads.

QUERY: What day of the week do most users register on and also providing insights on when to schedule an Ad campaign.

```
SELECT
   DAYNAME(created_at) AS day,
   COUNT(*) AS total_regs
FROM users
GROUP BY day
ORDER BY total_regs DESC;
```



CONCLUSION: The analysis from the above graph shows us Thursday and Sunday are having most registration.

B) Investor Metrics:

Our investors wants to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds.

1.User Engagement: Are users still as active and post on Instagram or they are making fewer posts

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

```
SELECT
  ROUND(
    (
      SELECT
        CO UNT(*)
      FROM
        photos
    ) /(
      SELECT
        COUNT(*)
      FROM
        users
    ),
    2
  );
```

CONCLUSION: The total number of photos on Instagram/total number of users are 2.57.

2.Bots & Fake Accounts: The investors want to know if the platform is crowded with fake and dummy accounts

QUERY: 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).

```
SELECT
  users.id,
  username,
  COUNT(users.id) AS total_likes
FROM
  users
  JOIN likes ON users.id = likes.user_id
GROUP BY
  users.id
HAVING
  total_likes = (
    SELECT
```

```
    COUNT(*)
  FROM
    photos
);
```

BOTS AND FAKE ACCOUNTS LIST

id	username	total_likes
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

CONCLUSION: The list from the above table shows the fake accounts or bots(dummy users) since the list of users have liked all photos which is impossible for real users to do.

Project Summary:

This report provides an overview of user analytics for Instagram platform. It includes metrics that measures user engagement and behavior, as well as insights used by the team across the business to launch a new marketing campaign and improve the experience altogether while helping the business grow.