
Instagram *User Analytics*



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[Github Link for SQL Code](#)

Project Description

Instagram is a popular social media app. People post photo for gaining followers and popularity. These Photos are Liked, Commented and Tagged by various users. Many Startups brands wants to promote their products and Services to peoples but do not want to spend too much due to less resources and budget on advertisement through TV ads and commercials. To address this issue, we have an option of hiring Social Media influencers because they have a huge fan following and popularity among Teenagers, Working Professionals, Housewives. These Social Media influencers promote the products and services for this new age startup and startup with less man power and resources. This project presents solution to the following needs and concerns of marketing and investors' team.

A) Marketing: The marketing team wants to launch some campaigns, and they need your help with the following.

1. **Rewarding Most Loyal Users:** People who have been using the platform for the longest time.
2. **Remind Inactive Users to Start Posting:** By sending them promotional emails to post their 1st 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.
4. **Hashtag Researching:** A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.
5. **Launch AD Campaign:** The team wants to know, which day would be the best day to launch ADs.

B) Investor Metrics: Our investors want 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.
2. **Bots & Fake Accounts:** The investors want to know if the platform is crowded with fake and dummy accounts

Approach

We have been provided SQL database file access by company. The file contains info in the form of Structured tables having info about comments, follows, likes, tags, users, photos, photo_tags. After finding relationship through Entity Relationship Diagram among various tables and identifying Primary Keys and Foreign Keys We have to perform various commands like joins, sub-queries, order by and group by to find desired output in MySQL.

Tech-Stack Used

For this project I have used MySQL Workbench 8.0.32. The MySQL database is popular relational database from Oracle. Due to its ease of access, fast performance, and Open Source. It performs queries very quickly on big datasets. Along with this its community version is available free and due to open source nature developer community is large and ready to help with support.

Insights

By analysing data we can see engagement patterns, effectiveness of Hashtags in Posts and how it helps in launching add campaign along with this How this data of post engagements in form of likes, comments, tags helps company to Schedule events and brandings.

Result

The Instagram analytics shows how analytics data collected from social media sites used for making decision and helps in promoting add campaigns and it also helps in finding the potential bots in Social media like instagram.

A) Marketing: The marketing team wants to launch some campaigns, for which following Questions are answered.

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

Solution:- For rewarding the Most Loyal Users I have picked up the Top 5 Users who have created Instagram profile first when Instagram Launched. This is the list of 5 oldest user of Instagram.

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

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

Solution:- This is the list of 26 Inactive Users who have not posted on Instagram and we have to send them promotional emails informing them to start post on Instagram.

id	username
5	Aniya_Hackett
7	Kasandra_Homenick
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
25	Tierra.Trantow
34	Pearl7
36	Ollie_Ledner37
41	Mckenna17
45	David.Osinski47
49	Morgan.Kassulke
53	Linnea59
54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
68	Franco_Keebler64
71	Nia_Haag
74	Hulda.Macejkovic
75	Leslie67
76	Janelle.Nikolaus81
80	Darby_Herzog
81	Esther.Zulauf61
83	Bartholome.Bernhard
89	Jessyca_West
90	Esmeralda.Mraz57
91	Bethany20

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.

Solution:- Zack_Kemmer93 is winner of the contest having Highest count of likes on a single photo.

User_ID	Winner	Most_Liked_Photo	Total_Likes_Count
52	Zack_Kemmer93	https://jarret.name	48

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

Solution:- Tags like “Smile”, “beach”, “party”, “fun” and “concert” are most used hashtags. Along with Number of times these hashtags used gives the idea about popularity of these hashtags.

Tag_ID	Tag_Name	Used_Number_Of_Times
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24

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

Solution:- There is two days of the week Thursday and Sunday when there is maximum registrations of 16. Assuming all circumstances same we should choose Sunday to launch ad campaign as it's a Holiday and there will be more number of engagements by people in free Time.

Day_of_Week	Total_Registrations
Thursday	16
Sunday	16

B) Investor Metrics: Our investors want 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

Solution:- An Average User post is 3.47. Total Number of Photos is 257 and there is 100 Users registered on Instagram.

AVERAGE_POSTS_PER_USER	TOTAL_PHOTOS	TOTAL_USERS
3.47	257	100

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

Solution:- This is the list of 13 id's where user(bots) who have liked every photo on the site.

ID
5
14
21
24
36
41
54
57
66
71
75
76
91
