INSTAGRAM USER ANALYSIS

Project on Data Analytics

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PROJECT DESCRIPTION

In this project, we aim to gain a comprehensive understanding of Instagram users and their behaviour to optimise our social media strategies. Our mission is to uncover patterns, understand engagement dynamics, and ultimately enhance our understanding of the Instagram community. By delving into user demographics, engagement patterns, and content preferences, we will unlock valuable insights that will help us better connect with our audience and grow our brand presence on Instagram.

GOALS

1.MARKETING ANALYSIS :

- **Loyal user reward** : To reward five oldest users.
- **Inactive user engagement** : To encourage those users who are inactive to start posting on the platform.
- **Contest winner declaration** : To organize a contest where the user with the most likes on a single photo wins and to identify the winner.
- **Hashtag research** : Identify and suggest the top five most commonly used hashtags on the platform.
- **Ad launch campaign launch** : The team wants to know the best day of the week to launch ads.Hence, we need to determine the day of the week when most users register on Instagram

2. INVESTOR METRICS :

- **User Engagement**: Calculate the average number of posts per user on Instagram to know if users are still active and posting on Instagram or if they are making fewer posts.
- **Bots and fake accounts** : Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

APPROACH

To get desired and meaningful insights from the given dataset, we need to analyse the data. SQL is a powerful tool for this purpose.

SQL is specifically designed to retrieve and manipulate data stored in relational databases. It allows analysts to extract relevant information efficiently and perform various data transformations, such as filtering, aggregating, joining, and sorting, to prepare the data for analysis.

TECH-STACK USED :

MySQL Shell of version 8.0.33 and MySQL workbench 8.0 by ORACLE. Also MySQL Community Server and MySQL Command-Line Client.

Insights

Most Loyal Users :

Based on the date of creation of the accounts, given below is the list of the five oldest Instagram users.

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

Inactive Users :

These are the users who have not posted a single photo on Instagram and hence they must be encouraged to do so by sending promotional e-mails.

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

Contest Winner :

Zack_Kemmer93 is the user who got the most likes(48 likes) on his single photo (photo id :145), hence he is the winner.

id	username	created_at
52	Zack_Kemmer93	2017-01-01 05:58:22
NULL	NULL	NULL

Hashtag Researching :

Given is the list of the top five hashtags used by Instagram users while posting. Hence, these hashtags can be used to reach most users.

ID	Hashtag	Number of time used
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24

AD Campaign Launch :

With the help of the given outcome, we can conclude that Day 1, and Day 5 are the most favorable days of the week to launch ads as on these days most of the accounts are registered.

Day of the week	Number of accounts registered
5	16
1	16
6	15
3	14
2	14
4	13
7	12

User Engagement :

There are a total of 100 users and 257 photos posted by these users on the platform, hence, it can be assumed that on average 2-3 photos are posted by each user.

	total user	total photos	average
▶	100	257	2.57

Bots and Fake Accounts :

These are the users who have liked each photo that has been posted on Instagram which is not possible for a real user, hence, it is obvious that these accounts are not authentic.

id	username	Total_likes_by_user
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

RESULT

Embarking on the Instagram User Analysis Project has been an incredible learning experience that has expanded my knowledge and skills in various ways. Working with SQL databases to store and manage the collected data exposed me to the power of relational databases and their role in handling large volumes of structured information. I became proficient in writing SQL queries to extract valuable insights from the data. Each problem I encountered became an opportunity to grow and expand my knowledge.