Instagram User Analytics Project

Project Description

The project is about the user analytics that how active is the user, how many photos he has liked, what is the number of inactive users, etc. These insights will be used by teams' business to launch a new marketing campaign, decide on features to build for an app, track the success of the app by measuring user engagement and improve the experience altogether while helping the business grow.

Purpose

The goal of this project is to study and analyse the user behaviour on Instagram and give insights to the stakeholders.

The project will identify the ways to derive business insights for marketing, product & development teams. Through this project, we will gain the knowledge about user behaviour and the engagement over the platform.

The final deliverable will recommend the most used hashtags, bot users and days to run the successful ad campaign.

Database

In order to draw meaningful conclusions that could be used for further decision making.

I had to collect data first. So, for that the commands were run from the following attachment:

https://docs.google.com/document/d/1-WhNRX1iYJIz7e5l28DMPWgsPklpE_w6/edit

in order to get a better understanding of the target audience and their needs. I also had to analyse the collected data

To complete this project the software used is DATABASE: MySQL v5.7 as it is easy to use and understandable.

Approach:

The main objective was to understand how they interact with our product. To do this, I analysed data from the database provided. By understanding our users' needs, we can create a product that is tailored to their needs and make sure that it meets all their expectations. Additionally, I wanted to use this project as an opportunity to learn more about user experience design principles so that I can apply them in future projects.

A. Marketing

The marketing team wants to launch some campaigns, and they need your help with the following

1. Find the 5 oldest users of the Instagram from the database provided.

```
SELECT *

FROM ig_clone.users

   ORDER BY created_at

   LIMIT 5;
```

Result:

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

```
SELECT

users.id,

username,

users.created_at

FROM ig_clone.users

LEFT JOIN ig_clone.photos
```

ON users.id = ig_clone.photos.user_id

WHERE ig_clone.photos.user_id IS NULL;

Result:

id	username	created_at
5	Aniya_Hackett	2016-12-07 01:04:39
7	Kasandra_Homenick	2016-12-12 06:50:08
14	Jaclyn81	2017-02-06 23:29:16
21	Rocio33	2017-01-23 11:51:15
24	Maxwell.Halvorson	2017-04-18 02:32:44
25	Tierra.Trantow	2016-10-03 12:49:21
34	Pearl7	2016-07-08 21:42:01
36	Ollie_Ledner37	2016-08-04 15:42:20
41	Mckenna17	2016-07-17 17:25:45
45	David.Osinski47	2017-02-05 21:23:37
49	Morgan.Kassulke	2016-10-30 12:42:31
53	Linnea59	2017-02-07 07:49:34
54	Duane60	2016-12-21 04:43:38
57	Julien_Schmidt	2017-02-02 23:12:48
66	Mike.Auer39	2016-07-01 17:36:15
68	Franco_Keebler64	2016-11-13 20:09:27
71	Nia_Haag	2016-05-14 15:38:50
74	Hulda.Macejkovic	2017-01-25 17:17:28
75	Leslie67	2016-09-21 05:14:01
76	Janelle.Nikolaus81	2016-07-21 09:26:09
80	Darby_Herzog	2016-05-06 00:14:21
81	Esther.Zulauf61	2017-01-14 17:02:34
83	Bartholome.Bernhard	2016-11-06 02:31:23
89	Jessyca_West	2016-09-14 23:47:05
90	Esmeralda.Mraz57	2017-03-03 11:52:27
91	Bethany20	2016-06-03 23:31:53

3. Identify the winner of the contest and provide their details to the team

```
SELECT
    users.id AS user_id,
    username,
        photos.id AS photo_id,
    photos.image_url,
    COUNT(*) AS total_likes_count
FROM ig_clone.photos
    JOIN ig_clone.likes
        ON photos.id = likes.photo_id
    JOIN ig_clone.users
        ON users.id = photos.user_id
    GROUP BY photos.id
    ORDER BY total_likes_count DESC
    LIMIT 1;
```

Result:

user_id	username	photo_id	image_url	total_likes_count
52	Zack_Kemmer93	145	https://jarret.name	48

4. **Identify and suggest the top 5 most commonly used hashtags on the platform**

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

Result:

tag_id	tag_name	total
21	smile	59
20	beach	42
17	party	39
13	fun	38
5	food	24

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

```
SELECT
    DAYNAME(created_at) AS day_of_the_week,
    COUNT(*) AS total_count
FROM ig_clone.users
    GROUP by day_of_the_week
    ORDER by total_count DESC;
```

Result:

day_of_the_week	total_count
Sunday	16
Thursday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B. <u>Investor Metrics:</u>

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. **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 COUNT(*) FROM ig_clone.photos ) / ( SELECT COUNT(*) FROM
ig_clone.users ),
        2
    ) AS avg_user_photo_post;
```

Result:

avg_user_photo_post
2.57

2. **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
    ig_clone.users.id AS user_id,
    ig_clone.users.username,
    COUNT(*) AS total_user_likes
FROM ig_clone.users
    JOIN ig_clone.likes
        ON ig_clone.users.id = ig_clone.likes.user_id
    GROUP BY users.id
    HAVING total_user_likes = (
        SELECT COUNT(*) FROM ig_clone.photos
    );
```

Result:

user_id	username	total_user_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:

Through this project, we were able to gain insights into how users think and behave when interacting with a product. We discovered a number of key insights about user behaviour, preferences, and expectations that can be used to inform future product design decisions. In particular, we identified trends in user behaviour that could be used to improve user experience, such as providing helpful feedback loops or streamlining processes for specific tasks. Overall, our user analysis project has provided us with valuable insights that can help us create better products in the future.