Instagram User Analytics Project

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.

Marketing

1. Top 5 oldest users

```
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. Remind Inactive Users to Start Posting

```
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. Contest Winner

```
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. Hashtag Researching

```
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

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) Investor Metrics:

1. User Engagement

```
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. Bot Accounts

```
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.