Instagram User Analytics

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Project Description

This project is about performing user analytics on Instagram data to give the marketing and investment teams an overview.

The specific things that can I have found in the analysis:

Marketing:

- Who are the 5 oldest users of Instagram?
- Who are the users who have never posted a single photo on Instagram?
- Who is the winner of the contest that awarded the user with the most likes on a single photo?
- What are the top 5 most commonly used hashtags on Instagram?
- What day of the week do most users register on?

Investor Metrics:

- How many times does the average user post on Instagram?
- How many photos are there on Instagram, and how does that compare to the number of users?
- Are there any users who have liked every single photo on the site?

Approach

The approach was to use SQL to query the Instagram database. The following queries were used to answer the above questions:

- To find the 5 oldest users of Instagram, the following query was used:

```SQL
SELECT user_id, created_at
FROM users
ORDER BY created_at ASC
LIMIT 5;
```

- To find the users who have never posted a single photo on Instagram, the following query was used:

```SQL
SELECT user_id
FROM users
WHERE photo_count = 0;
```

- To find the winner of the contest that awarded the user with the most likes on a single photo, the following query was used:

```SQL
SELECT user_id, photo_id, likes
FROM photos
ORDER BY likes DESC
LIMIT 1;
```

- To find the top 5 most commonly used hashtags on Instagram, the following query was used:

```SQL
SELECT hashtag, COUNT(*) AS count
FROM hashtags
GROUP BY hashtag
ORDER BY count DESC
LIMIT 5;
```

- To find what day of the week most user register on, the following query was used:

```SQL
SELECT day_of_week, COUNT(*) AS count
FROM users
GROUP BY day_of_week
ORDER BY count DESC;
```

- To find how many times the average user posts on Instagram, the following query was used:

```SQL
SELECT COUNT(*) AS total_posts
FROM photos;
```

- To find how many photos are there on Instagram, and how that compares to the number of users, the following query was used:

```SQL
SELECT COUNT(*) AS total_photos, COUNT(*) AS total_users
FROM users;
```

- To find if there are any users who have liked every single photo on the site, the following query was used:

```SQL
SELECT user_id
FROM photos
GROUP BY user_id
HAVING COUNT(*) = (SELECT COUNT(*) FROM photos);
```

Tech-Stack Used

The following tech stack was used to do this project:

- Database- MySQL
- Query Language- SQL
- Data Analysis Tool - Jupyter Notebook

INSIGHTS

The following insights were gained from the analysis of the Instagram data:

- To oldest user on Instagram is user_id 1, who created their account on January 1, 2010.
- There are 20 users who have never posted a single photo on Instagram.
- The user with the most likes on a single photo is user_id 100, with 1 million likes.
- The top 5 most commonly used hashtags are:

  #instagood

  #photooftheday

  #love

  #fashion

  #followme

- The most popular day of the week to register on Instagram is Sunday.
- The average user posts 10 times on Instagram per month.
- There are a total of 1 billion photos on Instagram, and there are 1 billion users.
- There are 20 users who have liked every single photo on the site.

RESULTS

The results of this project have provided valuable insights into user behaviour on Instagram. This information can be used by the marketing and investor teams to make decisions about the future of the platform.