Instagram User Analytics

Project description

This project on Instagram user analytics which has dataset such as username, photos, likes, comments, tags and how the user behave on Instagram to provide answers to management team.

Here task is to extract information from user database to make the decisions. The goal is to improve the user experience of Instagram and increase the user base.

Approach

Instagram user analytics project with the help of database created on MySQL sever, data from multiple tables is extracted using single row function joins and subquery concepts. Looking to the questions which need to be answered.

With the help of SQL we will be joining multiple tables and removing the data which is not needed to answer the question

Tech-Stack Used

Software: MySql workbench 8.0 CE **Version:** 8.0

Why?

MySql manages the data RDBMS which is basically based on SQL.
As we can create private server for each case interface of MySql is better, easy to learn and execution is easier MySql.

Results

Questions to be answered

A) Marketing

1) Rewarding Most Loyal Users: 5 oldest users of the Instagram

```
Query select username , id
      from users
      order by created_at
      limit 5 ;
```

username	id
Jordyn.Jacobson2	38
Elenor88	63
Emilio_Bernier52	67
Darby_Herzog	80
Nicole71	95

2) Remind Inactive Users to Start Posting: users who have never posted a single photo on Instagram

```
Query select distinct username , user_id
      from users
      left join photos
      on users.id = photos.user_id
      where user_id is null
      order by user_id ;
```

username	user_id
Aniya_Hackett	NULL
Bartholome.Bernhard	NULL
Bethany20	NULL
Darby_Herzog	NULL
David.Osinski47	NULL
Duane60	NULL
Esmeralda.Mraz57	NULL
Esther.Zulauf61	NULL
Franco_Keebler64	NULL
Hulda.Macejkovic	NULL
Jaclyn81	NULL
Janelle.Nikolaus81	NULL
Jessyca_West	NULL
Julien_Schmidt	NULL
Kasandra_Homenick	NULL
Leslie67	NULL
Linnea59	NULL
Maxwell.Halvorson	NULL
Mckenna17	NULL
Mike.Auer39	NULL
Morgan.Kassulke	NULL
Nia_Haag	NULL
Ollie_Ledner37	NULL
Pearl7	NULL
Rocio33	NULL
Tierra.Trantow	NULL

3) Declaring Contest Winner: the winner of the contest

```
Query select username
        from users
        where id =( select user_id
                    from photos
                    where id = (select photo_id
                                from (select photo_id , count(*)
                                      from likes
                                      group by photo_id
                                      order by count(*) desc
                                      limit 1 )sub));
```

username
Zack_Kemmer93

4) Hashtag Researching: top 5 most commonly used hashtags on Instagram

```
Query  select tag_name , count(*)
        from tags
        inner join  photo_tags
        where tags.id =  photo_tags.tag_id
        group by tag_id
        order by count(*) desc
        limit 5;
```

tag_name	count(*)
smile	59
beach	42
party	39
fun	38
concert	24

5) Launch AD Campaign: day of the week do most users register on

```
Query select dayname(created_at)  as days, count(*)
        from users
        group by days
        order by count(*) desc ;
```

days	count(*)
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B) Investor Metrics:

1) User Engagement: how many times does average user posts on Instagram

```
Query select count(users.id) as total_user ,
        count(photos.id) as total_photos ,
        count(photos.id)/count(users.id) as
        avg_post_peruser
        from users
        right join photos
        on users.id=photos.id ;
```

total_user	total_photos	avg_post_peruser
100	257	2.5700

2) Bots & Fake Accounts: users (bots) who have liked every single photo on the site

```
Query select username
        from users
        where id in (select user_id
                    from likes
                    group by user_id
            having count(*) = (select count(*) from photos));
```

username
Aniya_Hackett
Jadyn81
Rocio33
Maxwell.Halvorson
Ollie_Ledner37
Mckenna17
Duane60
Julien_Schmidt
Mike.Auer39
Nia_Haag
Leslie67
Janelle.Nikolaus81
Bethany20