Instagram User Analytics

Trainity.co

Presented by
Kartik Arora

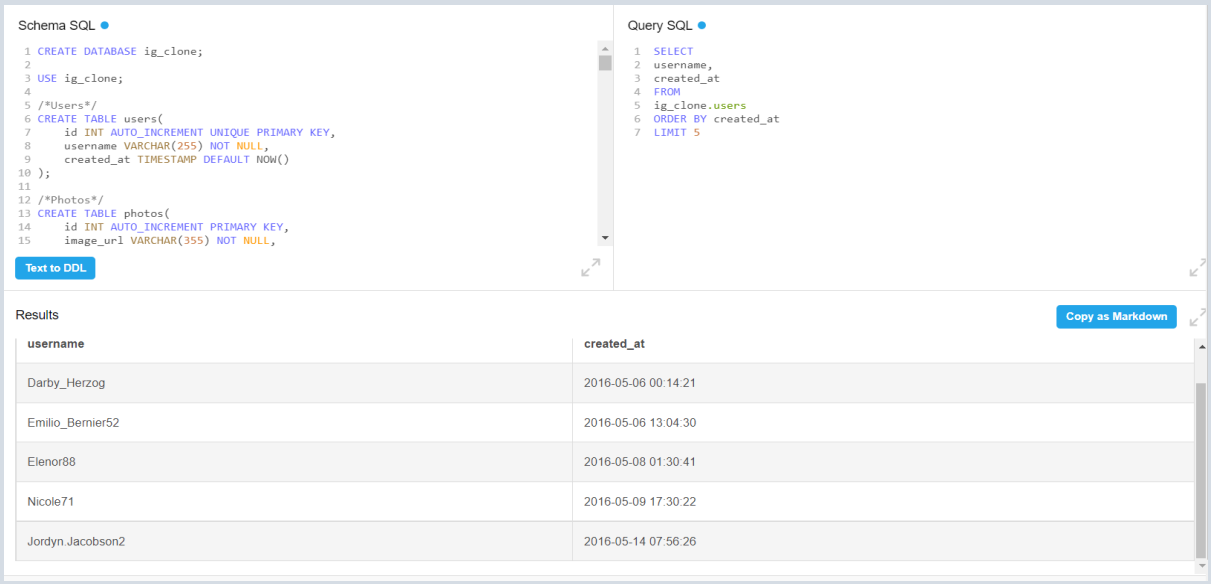
Presented to
Trainity.co

DECEMBER 10

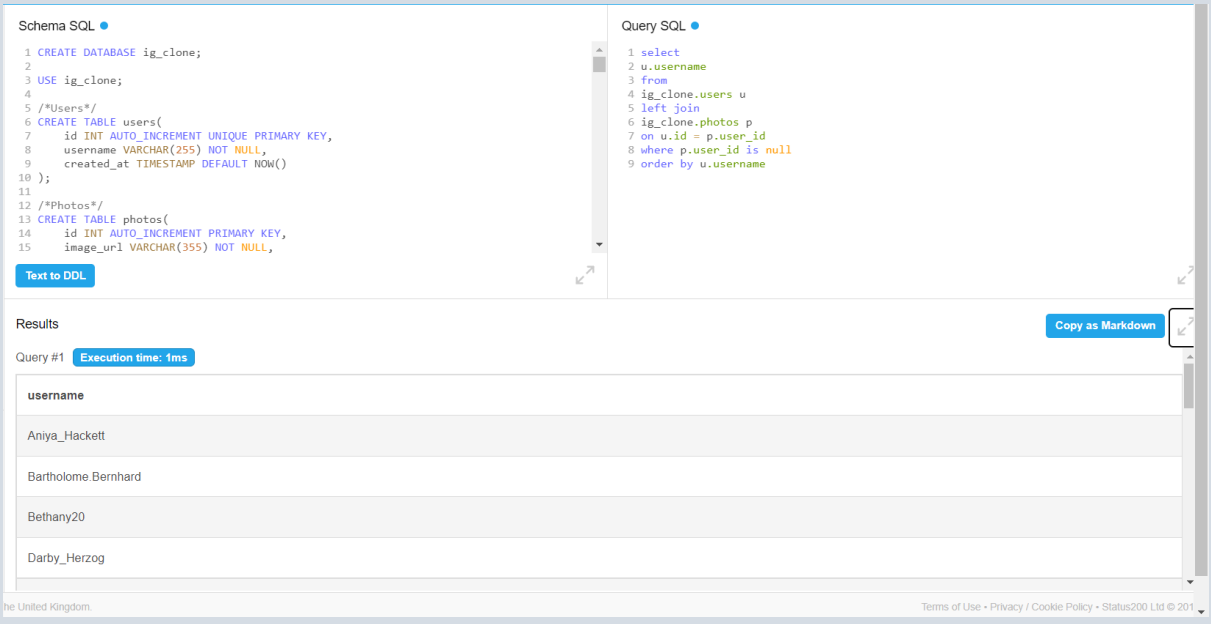
Detailed Report:-

A) Marketing: The marketing team wants to launch some campaigns, and they need your help with the following:-

1. **Rewarding Most Loyal Users**: 5 oldest users of the Instagram from the database.



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



3. **Declaring Contest Winner:** who gets the most likes on a single photo.

Schema SQL

```
    id INT AUTO_INCREMENT UNIQUE PRIMARY KEY,
    username VARCHAR(255) NOT NULL,
    created_at TIMESTAMP DEFAULT NOW()
);

/*Photos*/
CREATE TABLE photos(
    id INT AUTO_INCREMENT PRIMARY KEY,
    image_url VARCHAR(355) NOT NULL,
    user_id INT NOT NULL,
    created_dat TIMESTAMP DEFAULT NOW(),
    FOREIGN KEY(user_id) REFERENCES users(id)
);

/*Comments*/
```

Text to DDL

Query SQL

```
select
users.username,
likes.Photo_id,
photos.image_url,
count (likes.User_id) as like_user
from
ig_clone.likes likes
inner join
ig_clone.photos photos
on likes.photo_id = photos.id
inner join
ig_clone.users users
on photos.user_id = users.id
group by likes.Photo_ID, users.username
order by Like_user desc
```

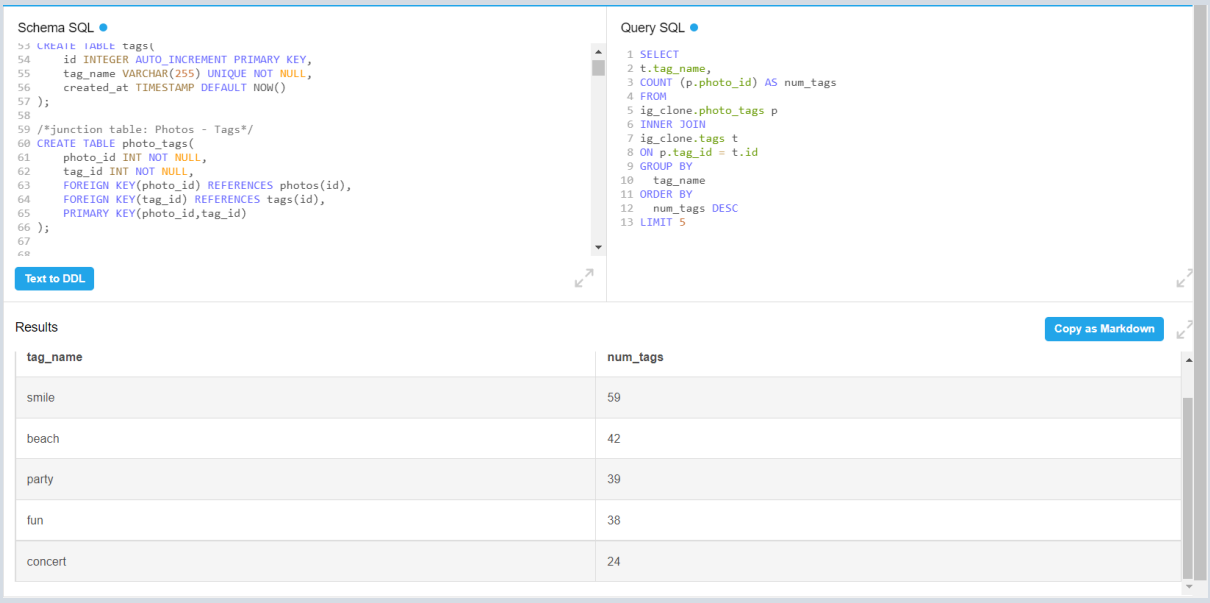
Results

Copy as Markdown

Query #1 Execution time: 4ms

username	Photo_id	image_url	like_user
Zack_Kemmer93	145	https://jarret.name	48

4. **Hashtag Researching:** the top 5 most commonly used hashtags on the platform.



Schema SQL

```
CREATE TABLE tags(
    id INTEGER AUTO_INCREMENT PRIMARY KEY,
    tag_name VARCHAR(255) UNIQUE NOT NULL,
    created_at TIMESTAMP DEFAULT NOW()
);

/*junction table: Photos - Tags*/
CREATE TABLE photo_tags(
    photo_id INT NOT NULL,
    tag_id INT NOT NULL,
    FOREIGN KEY(photo_id) REFERENCES photos(id),
    FOREIGN KEY(tag_id) REFERENCES tags(id),
    PRIMARY KEY(photo_id,tag_id)
);
```

Text to DDL

Query SQL

```
SELECT
t.tag_name,
COUNT (p.photo_id) AS num_tags
FROM
ig_clone.photo_tags p
INNER JOIN
ig_clone.tags t
ON p.tag_id = t.id
GROUP BY
  tag_name
ORDER BY
  num_tags DESC
LIMIT 5
```

Results

Copy as Markdown

tag_name	num_tags
smile	59
beach	42
party	39
fun	38
concert	24

5. **Launch AD Campaign**: What day of the week do most users register on?

Schema SQL

```
CREATE DATABASE ig_clone;

USE ig_clone;

/*Users*/
CREATE TABLE users(
    id INT AUTO_INCREMENT UNIQUE PRIMARY KEY,
    username VARCHAR(255) NOT NULL,
    created_at TIMESTAMP DEFAULT NOW()
);

/*Photos*/
CREATE TABLE photos(
    id INT AUTO_INCREMENT PRIMARY KEY,
    image_url VARCHAR(355) NOT NULL,
```

Text to DDL

Query SQL

```
SELECT
    DAYNAME(created_at) AS day,
    COUNT(username) AS num_users
FROM
ig_clone.users
GROUP BY
day
ORDER BY
num_users DESC
LIMIT 2;
```

Results

Copy as Markdown

Query #1 Execution time: 1ms

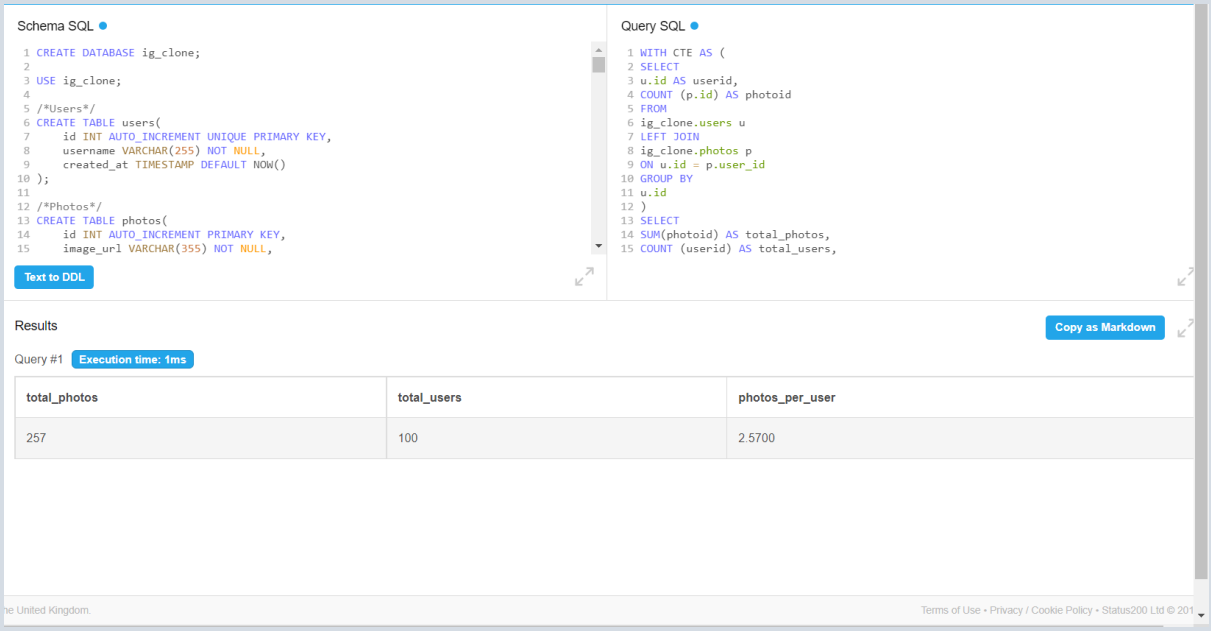
day	num_users
Sunday	16
Thursday	16

he United Kingdom. Terms of Use • Privacy / Cookie Policy • Status200 Ltd © 201

Most user register on Sunday and Thursday.

B) **Investor Metrics:** 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. **User Engagement**: how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users.



Schema SQL

```
CREATE DATABASE ig_clone;

USE ig_clone;

/*Users*/
CREATE TABLE users(
    id INT AUTO_INCREMENT UNIQUE PRIMARY KEY,
    username VARCHAR(255) NOT NULL,
    created_at TIMESTAMP DEFAULT NOW()
);

/*Photos*/
CREATE TABLE photos(
    id INT AUTO_INCREMENT PRIMARY KEY,
    image_url VARCHAR(355) NOT NULL,
```

Text to DDL

Query SQL

```
WITH CTE AS (
SELECT
u.id AS userid,
COUNT (p.id) AS photoid
FROM
ig_clone.users u
LEFT JOIN
ig_clone.photos p
ON u.id = p.user_id
GROUP BY
u.id
)
SELECT
SUM(photoid) AS total_photos,
COUNT (userid) AS total_users,
```

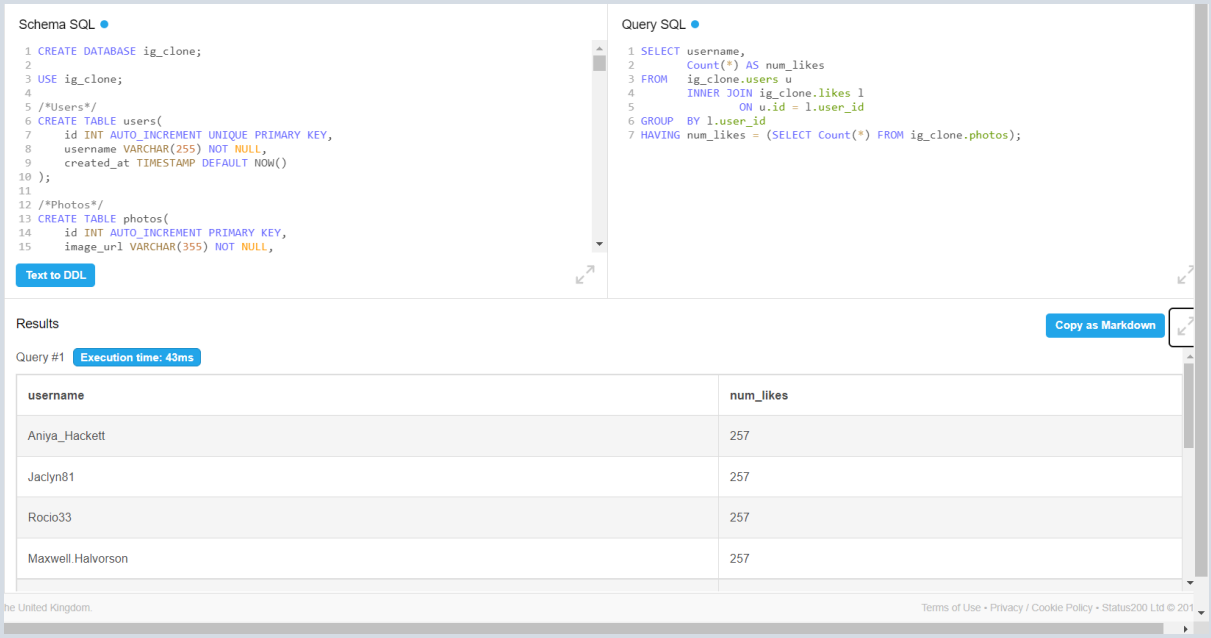
Results

Copy as Markdown

Query #1 Execution time: 1ms

total_photos	total_users	photos_per_user
257	100	2.5700

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



Schema SQL

```
CREATE DATABASE ig_clone;

USE ig_clone;

/*Users*/
CREATE TABLE users(
    id INT AUTO_INCREMENT UNIQUE PRIMARY KEY,
    username VARCHAR(255) NOT NULL,
    created_at TIMESTAMP DEFAULT NOW()
);

/*Photos*/
CREATE TABLE photos(
    id INT AUTO_INCREMENT PRIMARY KEY,
    image_url VARCHAR(355) NOT NULL,
```

Text to DDL

Query SQL

```
SELECT username,
       Count(*) AS num_likes
FROM   ig_clone.users u
       INNER JOIN ig_clone.likes l
               ON u.id = l.user_id
GROUP  BY l.user_id
HAVING num_likes = (SELECT Count(*) FROM ig_clone.photos);
```

Results

Copy as Markdown

Query #1 Execution time: 43ms

username	num_likes
Aniya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halvorson	257

he United Kingdom.

Terms of Use • Privacy / Cookie Policy • Status200 Ltd © 201

Project Description: This project is about me working with the product team of Instagram and the product manager has asked me to provide insights on the questions asked by the management team. By the method of User analysis, I will track how users engage and interact With Instagram.

Approach: First of all, I have used the database provided to me by the management team and then took their insights to launch a new marketing campaign, decided new features for Instagram, measuring user engagement and improve overall user experience. I have executed all of this by running queries as per the situation given.

Tech-Stack Used: I have used the DB Fiddle online SQL editor and MySQL v8.0 while making the project.

Insights: I got a lot of knowledge by making this project, before this I only had theoretical knowledge but by making this project, I got practical knowledge as well as hands-on experience like how it feels when you are working with an esteemed company and used my skills and gained experience. In this project, I have a very large amount of dataset of Instagram in which I have to run multiple queries to find out about the users.

Result: I have achieved exposure and experience in how to apply data analysis in real life and how it can help my company to stay one step ahead of others.