Instagram User Analytics

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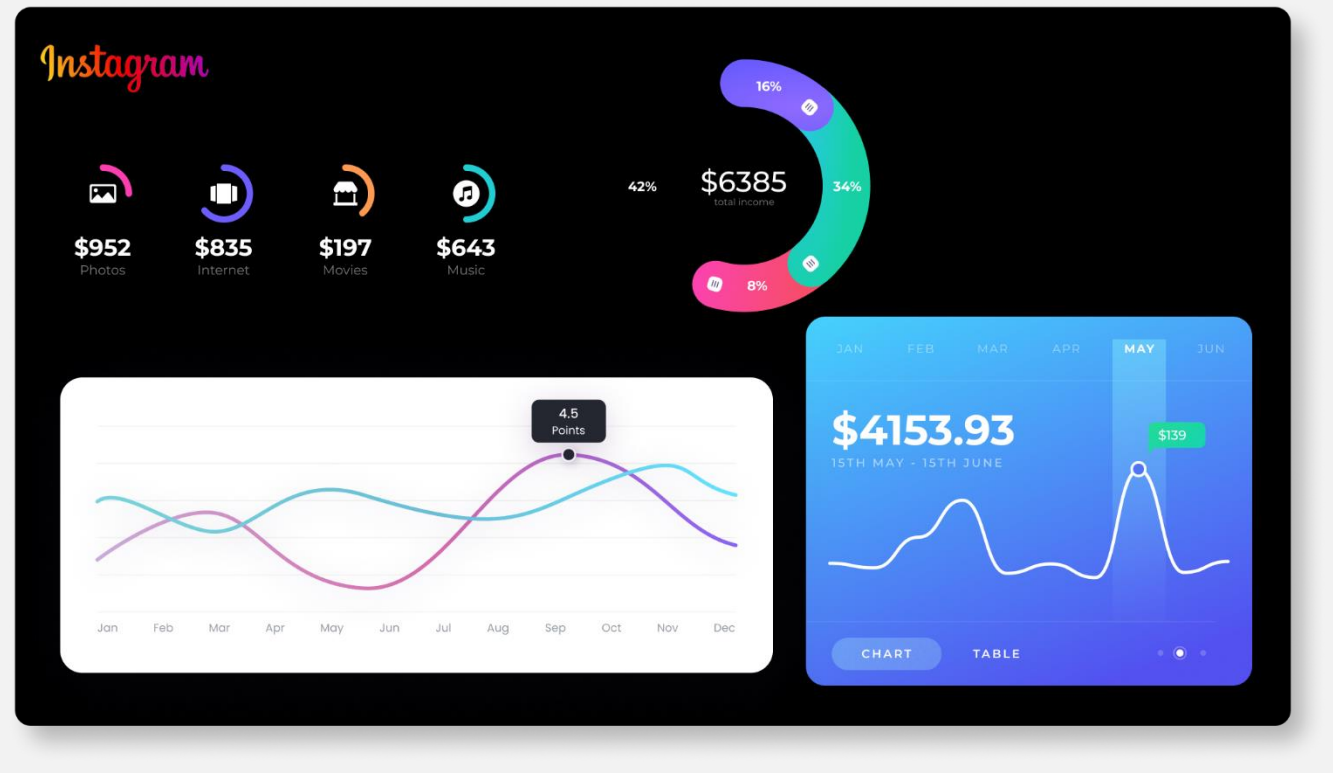
Description

User analysis is the process by which we track how users engage and interact with our digital product (software or mobile application) in an attempt to derive business insights for marketing, product & development teams.

These insights are then used by teams across the 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.

You are working with the product team of Instagram and the product manager has asked you to provide insights on the questions asked by the management team.



Approach

First, I started off by cloning the dataset into my device using MySql. I then ran a series of commands to filter out data from the database according to the criteria demanded by the user.

Tech-Stack Used

- MySql
- MySql Work Bench
- Google Docs

Insights

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

1. Rewarding Most Loyal Users: People who have been using the platform for the longest time.
   What I Did: Find the 5 oldest users of the Instagram from the database provided

```
mysql> SELECT * FROM users ORDER BY created_at ASC LIMIT 5;
+----+------------------+---------------------+
| 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 |
+----+------------------+---------------------+
5 rows in set (0.00 sec)
```

2. Remind Inactive Users to Start Posting: By sending them promotional emails to post their 1st photo.
   What I Did: Find the users who have never posted a single photo on Instagram

```
mysql> SELECT * FROM users WHERE users.id NOT IN (SELECT user_id FROM photos);
+----+---------------------+---------------------+
| 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 |
+----+---------------------+---------------------+
26 rows in set (0.02 sec)
```

3. Declaring Contest Winner: The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner.
   What I Did: Identify the winner of the contest and provide their details to the team
4. Hashtag Researching: A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.

What I Did: Identify and suggest the top 5 most commonly used hashtags on the platform

```
mysql> SELECT TAG_ID FROM PHOTO_TAGS GROUP BY TAG_ID ORDER BY COUNT(TAG_ID) DESC LIMIT 5;
+--------+
| TAG_ID |
+--------+
|     21 |
|     20 |
|     17 |
|     13 |
|     18 |
+--------+
5 rows in set (0.00 sec)

mysql> SELECT * FROM TAGS WHERE ID IN (21,20,17,13,18);
+----+----------+---------------------+
| id | tag_name | created_at          |
+----+----------+---------------------+
| 13 | fun      | 2022-07-26 13:08:44 |
| 17 | party    | 2022-07-26 13:08:44 |
| 18 | concert  | 2022-07-26 13:08:44 |
| 20 | beach    | 2022-07-26 13:08:44 |
| 21 | smile    | 2022-07-26 13:08:44 |
+----+----------+---------------------+
5 rows in set (0.00 sec)
```

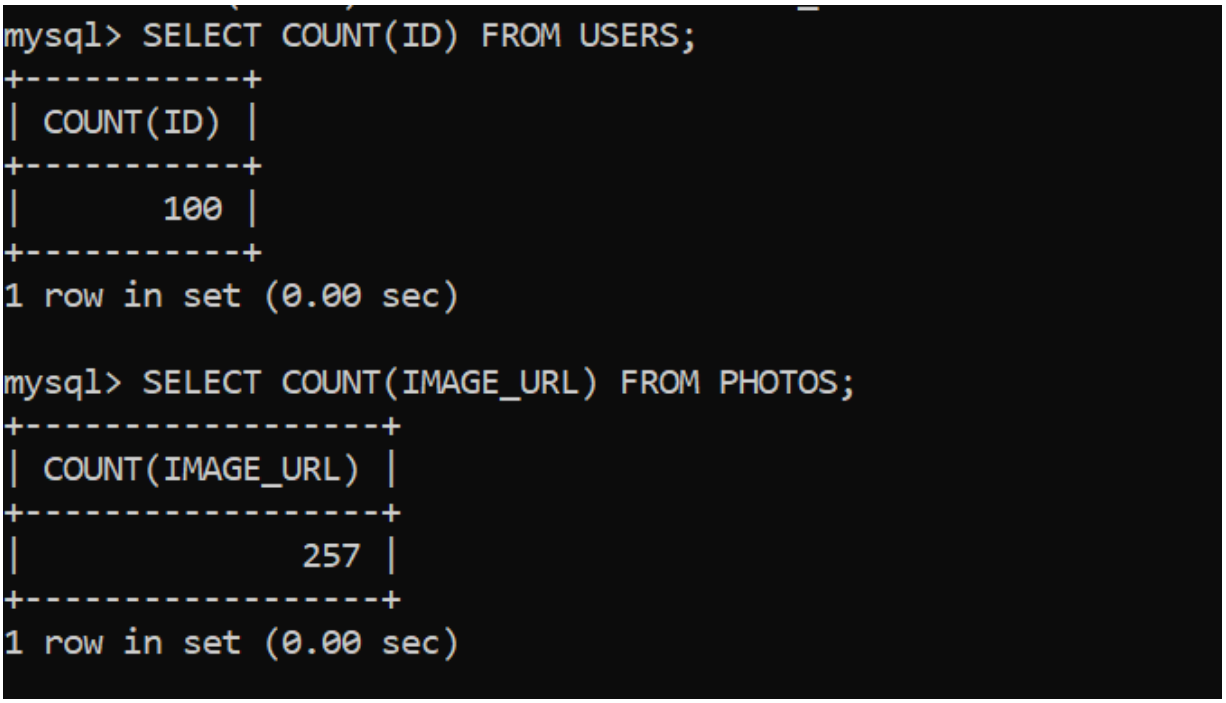
5. Launch AD Campaign: The team wants to know, which day would be the best day to launch ADs.
   What I Did: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

```
mysql>  SELECT DAYOFWEEK(created_at) FROM users GROUP BY created_at ORDER BY COUNT(created_at) DESC LIMIt 1;
+----------------------+
| DAYOFWEEK(created_at) |
+----------------------+
|                    5 |
+----------------------+
1 row in set (0.00 sec)
```

   5th day of the week i.e Thursaday

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: Are users still as active and post on Instagram or they are making fewer posts
   What I Did: Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users



2. Bots & Fake Accounts: The investors want to know if the platform is crowded with fake and dummy accounts
   What I Did: 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).

Resources

SQL Installation Resources

Dataset for SQL Database

Result

It would have been impossible or very time consuming for an ordinary human to be able to process such large bits of information. A computer can do it within seconds with the right commands. That's why companies like Instagram hire data analysts to control the waves of data they collect every day, makes sense of it, and then draw conclusions or make predictions. This is the process of turning data into insights, and it's how analysts help businesses put all their data to good use.

The more detailed definition you learned earlier is that data analysis is the collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making.

Data analytics can help organizations completely rethink something they do or point them in a totally new direction. For example, maybe data leads them to a new product or unique service, or maybe it helps them find a new way to deliver an incredible customer experience.