

Instagram User Analytics

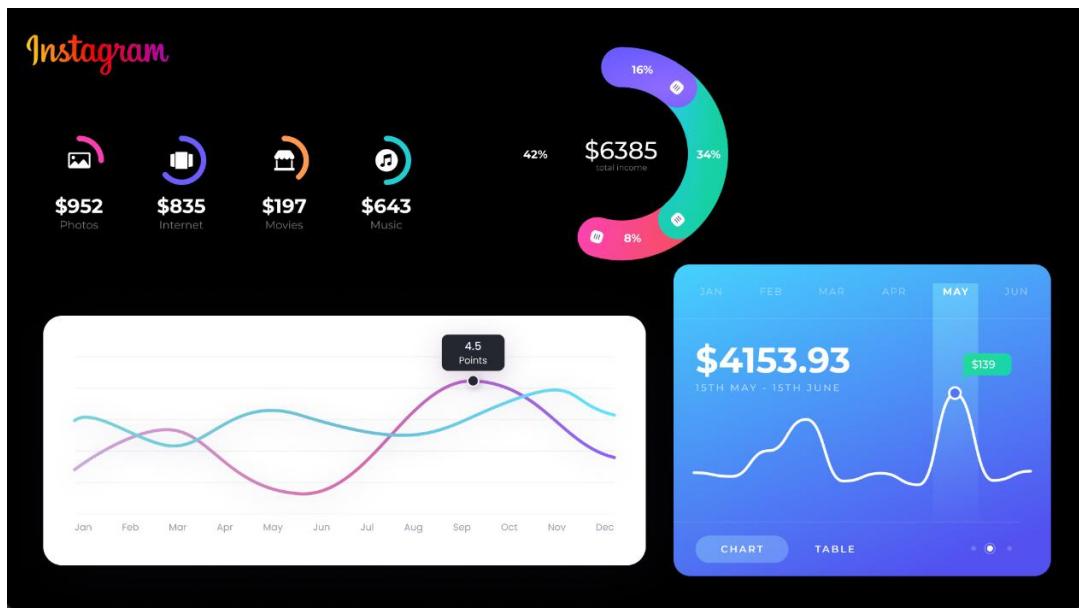
Project Report

Instagram User Analytics

Project description:

I worked as a Data Analyst trainee, analyzing user behavior and engagement data for an Instagram-like product. The purpose was to create insights that could help create product and marketing objectives by using SQL queries to pull insights from real-world structured data.

Tool	Purpose
MySQL 8.0 CE	Running queries, managing database
MySQL Workbench	Writing queries & exploring schema
Google Drive	Hosting query report



SQL Tasks :

A) Marketing Analysis:

- Identify the five oldest users on the platform.
- Find users who have never posted a photo.
- Determine the winner of a contest based on likes.
- Find the top five most commonly used hashtags.
- Analyze user registration days to suggest optimal ad campaign timing.

```

91
92 •   SELECT id, username, created_at
93     FROM users
94     ORDER BY created_at ASC
95     LIMIT 5;
96

```

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
HULL	HULL	HULL



```
96
97 •   SELECT u.id, u.username
98     FROM users u
99     LEFT JOIN photos p ON u.id = p.user_id
100    WHERE p.user_id IS NULL;
101
```

—

Result Grid | Filter Rows: Export:

	id	username
▶	5	Aniya_Hackett
	83	Bartholome.Bernhard
	91	Bethany20
	80	Darby_Herzog
	45	David.Osinski47
	54	Duane60
	90	Esmeralda.Mraz57
	81	Esther.Zulauf61
	68	Franco_Keebler64
➤		...

```
107
108 •   SELECT
109     t.tag_name,
110     COUNT(*) AS usage_count
111   FROM
112     photo_tags pt
113   INNER JOIN tags t ON pt.tag_id = t.id
114   GROUP BY
115     t.tag_name
116   ORDER BY
117     usage_count DESC
118   LIMIT 5;
119
120
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |

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

Result Grid | Form Editor

```
101
102 •   USE ig_clone;
103
104 •   SELECT users.id AS user_id, users.username,
105     photos.id AS photo_id,
106     photos.image_url, COUNT(*) AS total
107
108   FROM photos
109   INNER JOIN likes
110   ON likes.photo_id = photos.id
111   INNER JOIN users
112   ON photos.user_id = users.id
113   GROUP BY photos.id
114   ORDER BY total DESC
115   LIMIT 1;
116
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

user_id	username	photo_id	image_url	total
52	Zack_Kemmer93	145	https://jarret.name	48

```

121 •   SELECT DAYNAME(created_at) AS day_of_week, COUNT(*) AS total_users
122     FROM users
123     GROUP BY day_of_week;
124

```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	day_of_week	total_users
▶	Thursday	16
	Sunday	16
	Tuesday	14
	Saturday	12
	Wednesday	13
	Monday	14
	Friday	15

B) Investor Metrics:

- Calculate the average number of posts per user.
- Determine total photos divided by total users.
- Identify potential bot accounts (users who liked every post)

```

140 •   USE ig_clone;
141 •   SELECT
142     (SELECT count(*) FROM photos)/(SELECT count(*) FROM users) as
143     total_photos_per_total_user;
144

```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	total_photos_per_total_user
▶	2.5700

```

146 •   USE ig_clone;
147 •   SELECT user_id, username, count(*) as total_likes_per_user
148     FROM users
149     INNER JOIN likes
150       ON users.id = likes.user_id
151     GROUP BY likes.user_id
152     HAVING total_likes_per_user = (SELECT count(*) FROM photos);
153
154

```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	user_id	username	total_likes_per_user
▶	5	Aniya_Hackett	257
	91	Bethany20	257
	54	Duanie60	257
	14	Jadyn81	257
	76	Janelle.Nikolaus81	257
	57	Julien_Schmidt	257
	75	Leslie67	257
	24	Maxwell.Halvorson	257
	41	Mcenna17	257
	66	Mike_Auer39	257
	71	Nia_Haag	257
	36	Ollie_Ledner37	257
	21	Rocio33	257

➤ Supporting my Analysis:-

1. Handling of relational data can be done easily using SQL.
2. MySQL helps us to understand the data easily and gives us consistency in understanding the data and analyze it.
3. It helps perform faster analysis with better error tracking and we can handle it on time.
4. Data related tasks can be handled easily.



Key Takeaways

- Improved my SQL query writing and optimization skills.
- Understood how structured data can guide business and marketing strategy.
- Learned to interpret user engagement patterns.
- Gained experience with schema design and relational joins.



GitHub Repository:

- (<https://github.com/Aditi-Cs-devlop/instagram-clone-database>)
- LinkedIn: (https://www.linkedin.com/in/aditi-sawale-b590762b0?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=android_app)