INSTAGRAM USER ANALYSIS

Presented By Renuka Joshi

CONTENTS

PROJECT OVERVIEW

In this project, we are supposed to provide a detailed report for the Marketing and Investor Metrics department. This analysis will help them make a decision based on different metrics and insights.

MARKETING

- **Rewarding most loyal users :** Find the 5 oldest users of the instagram from the database provided
- **Remind inactive users to start posting :** Find the users who have never posted a single photo on instagram
- **Declaring contest winner :** Identify the winner of the contest and provide their details to the team.
- **Hashtag researching :** Identify and suggest the top 5 most commonly used hashtags on the platform.
- **Launch ad campaign :** What day of the week do most users register on ? Provide insights on when to schedule an ad campaign.

INVESTOR METRICS

- **User Engagement:** Provide how many times does average user posts on instagram. Also, provide the total number of photos on instagram / total number of users.

- **Bots & Fake Accounts:** 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).

REWARDING THE MOST LOYAL USERS

```sql
SELECT
    *
FROM
    users
ORDER BY created_at ASC
LIMIT 5;
```

Result Grid | Filter Rows:

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
NULL	NULL	NULL

REMIND INACTIVE USRS TO START POSTNG

```
SELECT
    *
FROM
    users
        LEFT JOIN
    photos ON users.id = photos.user_id
WHERE
    photos.user_id IS NULL;
```

Result Grid | Filter Rows:

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

DECLARING CONTEST WINNER

```sql
SELECT
    users.username,
    photos.id,
    photos.image_url,
    COUNT(likes.user_id) AS total_likes
FROM
    photos
        INNER JOIN
    likes ON likes.photo_id = photos.id
        INNER JOIN
    users ON photos.user_id = users.id
GROUP BY photos.id
ORDER BY total_likes DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export:

username	id	image_url	total_likes
Zack_Kemmer93	145	https://jarret.name	48

HASHTAG RESEARCHING

```sql
SELECT
    tags.tag_name, COUNT(*) AS total_tags
FROM
    photo_tags
        JOIN
    tags ON photo_tags.tag_id = tags.id
GROUP BY tags.id
ORDER BY total_tags DESC
LIMIT 5;
```

Result Grid | Filter Rov

	tag_name	total_tags
▶	smile	59
	beach	42
	party	39
	fun	38
	concert	24

LAUNCH AD CAMPAIGN

```sql
SELECT
    DAYNAME(created_at) AS day, COUNT(*) AS total_reg
FROM
    users
GROUP BY day
ORDER BY total_reg DESC
LIMIT 1;
```

The best time to schedule an advertisement campaign is on Thursday

Result Grid | Filter Rows:

	day	total_reg
▶	Thursday	16

USER ENGAGEMENT

```
SELECT
    AVG(photo_count) AS avg_posts_per_user
FROM
    (SELECT
        user_id, COUNT(id) AS photo_count
    FROM
        photos
    GROUP BY user_id) AS user_photos;
```

Result Grid | Filter

	avg_posts_per_user
▶	3.4730

USER ENGAGEMENT

```
SELECT
    (SELECT
            COUNT(*)
        FROM
            photos) / (SELECT
            COUNT(*)
        FROM
            users) AS ratio;
```

Result Grid

	ratio
▶	2.5700

BOTS & FAKE ACCOUNTS

```sql
SELECT
    u.id, u.username
FROM
    users u
WHERE
    NOT EXISTS( SELECT
            p.id
        FROM
            photos p
        WHERE
            p.id NOT IN (SELECT
                    l.photo_id
                FROM
                    likes l
                WHERE
                    l.user_id = u.id));
```

Result Grid | Filter Rows:

id	username
5	Aniya_Hackett
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
36	Ollie_Ledner37
41	Mckenna17
54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
71	Nia_Haag
75	Leslie67
76	Janelle.Nikolaus81
91	Bethany20

APPROACH

- For this project, I have used MySQL to extract the required data from the given database using the join function, subqueries, aggregation, where condition, group by, distinct and other functions required.
- Keeping the primary key and foreign key in consideration provided all the reports asked by the marketing department and investor metric department.
- I have used canva for making this presentation as it contains required elements, graphs, images which made this project more attractive.

INSIGHTS & RESULTS

- From this project, I got an idea about how as a business analyst or data analyst we work on real-time data to take data-driven decisioons.
- One thing I infer about this project is the dataset provided was very limited and small in respect of rows and columns. But still, it was a very good experience working on such kind of project.
- It helped me a lot to understand the analysis process well, and to provide insights for the best decision possible.

THANK YOU