

INSTAGRAM USER ANALYTICS

Project Description:

The project involves analysing Instagram's database to provide insights on various marketing and investor metrics. The project aims to identify the most loyal and inactive users, the winner of a contest, commonly used hashtags, and the best day to launch AD campaigns. Additionally, the project aims to assess user engagement and the presence of fake accounts on the platform.

Approach:

We will use SQL to perform data analysis on Instagram's database. We will use various queries to identify the required information and provide insights on marketing and investor metrics.

Tech-Stack Used:

We have used **MySQL Workbench version 8.0** to access and analyse the database. Additionally, we have used **Jupyter Notebook version 6.4.4** to document the analysis.

Insights:

Through the analysis, we have identified the following insights:

- The five oldest users on Instagram are: 'Darby_Herzog', 'Emilio_Bernier52', 'Elenor88', 'Nicole71', and 'Jordyn.Jacobson'.

```
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
•	NULL	NULL	NULL

- Users who have never posted a single photo on Instagram are:

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

	id	username	created_at
▶	5	Aniya_Hackett	2016-12-07 01:04:39
	7	Kassandra_Homenick	2016-12-12 06:50:08
	14	Jadyn81	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

- The winner of the contest with the most likes on a single photo is user with user_id -5 . They received 257likes their photo.

```
SELECT likes.user_id, COUNT(*) AS num_likes
FROM likes
JOIN photos ON likes.photo_id = photos.id
GROUP BY likes.user_id
ORDER BY num_likes DESC
LIMIT 1;
```

Result Grid			Filter Rows:
	user_id	num_likes	
▶	5	257	

- The top five most commonly used hashtags on Instagram are: #beach, #beauty, #concert, #delicious, #dreamy

```
SELECT tag_name, COUNT(*) AS count
FROM tags
GROUP BY tag_name
ORDER BY count DESC
LIMIT 5;
```

- | | tag_name | count |
|---|-----------|-------|
| ▶ | beach | 1 |
| | beauty | 1 |
| | concert | 1 |
| | delicious | 1 |
| | dreamy | 1 |

- The day of the week with the most user registrations is Thursday. Therefore, it would be ideal to launch AD campaigns on Thursdays.

```
SELECT DAYNAME(created_at) AS day_of_week, COUNT(*) AS count
FROM users
GROUP BY day_of_week
ORDER BY count DESC
LIMIT 1;
```

	day_of_week	count
▶	Thursday	16

INVESTOR METRICS

Furthermore, we have identified the following investor metrics:

- The average user posts 3.47 times on Instagram.

```
SELECT COUNT(*)/COUNT(DISTINCT user_id) AS avg_photos_per_user
FROM photos;
```

	avg_photos_per_user
▶	3.4730

- There are no users who have liked every single photo on the site. This suggests that there are no bots or fake accounts present on the platform.

Result:

Through this project, we have successfully provided insights on various marketing and investor metrics. This analysis can help the marketing team in launching effective campaigns and help investors in assessing the platform's performance. Overall, this project has helped us gain a better understanding of Instagram's database and its user engagement patterns.

Author-

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