

Instagram User Analytics

DATA REPORT

SQL Tasks :

A) Marketing Analysis:

Loyal User Reward: The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.

Your Task: Identify the five oldest users on Instagram from the provided database.

SYNTAX :

```
SELECT * FROM ig_clone.users;  
use ig_clone;  
select * from users  
order by created_at asc  
limit 5
```

OUTPUT :

	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

80 , 67 , 63 , 95 , 38 are the oldest users of Instagram .

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RESULT :

Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails.

Your Task: Identify users who have never posted a single photo on Instagram.

SYNTAX :

```
select * from users
left join photos on users.id = photos.user_id
where user_id is null ;
```

	id	username	created_at	id	image_url	user_id	created_d
►	5	Aniya_Hackett	2016-12-07 01:04:39	NULL	NULL	NULL	NULL
	7	Kasandra_Homenick	2016-12-12 06:50:08	NULL	NULL	NULL	NULL
	14	Jadyn81	2017-02-06 23:29:16	NULL	NULL	NULL	NULL
	21	Rocio33	2017-01-23 11:51:15	NULL	NULL	NULL	NULL
	24	Maxwell.Halvorson	2017-04-18 02:32:44	NULL	NULL	NULL	NULL
	25	Tierra.Trantow	2016-10-03 12:49:21	NULL	NULL	NULL	NULL
	34	Pearl7	2016-07-08 21:42:01	NULL	NULL	NULL	NULL
	36	Ollie_Ledner37	2016-08-04 15:42:20	NULL	NULL	NULL	NULL
	41	Mckenna17	2016-07-17 17:25:45	NULL	NULL	NULL	NULL
	45	David.Osinski47	2017-02-05 21:23:37	NULL	NULL	NULL	NULL
	49	Morgan.Kassulke	2016-10-30 12:42:31	NULL	NULL	NULL	NULL
	53	Linnea59	2017-02-07 07:49:34	NULL	NULL	NULL	NULL
	54	Duane60	2016-12-21 04:43:38	NULL	NULL	NULL	NULL

	id	username	created_at	id	image_url	user_id	created
	57	Julien_Schmidt	2017-02-02 23:12:48	NULL	NULL	NULL	NULL
	66	Mike.Auer39	2016-07-01 17:36:15	NULL	NULL	NULL	NULL
	68	Franco_Keebler64	2016-11-13 20:09:27	NULL	NULL	NULL	NULL
	71	Nia_Haag	2016-05-14 15:38:50	NULL	NULL	NULL	NULL
	74	Hulda.Macejkovic	2017-01-25 17:17:28	NULL	NULL	NULL	NULL
	75	Leslie67	2016-09-21 05:14:01	NULL	NULL	NULL	NULL
	76	Janelle.Nikolaus81	2016-07-21 09:26:09	NULL	NULL	NULL	NULL
	80	Darby_Herzog	2016-05-06 00:14:21	NULL	NULL	NULL	NULL
	81	Esther.Zulauf61	2017-01-14 17:02:34	NULL	NULL	NULL	NULL
	83	Bartholome.Bernhard	2016-11-06 02:31:23	NULL	NULL	NULL	NULL
	89	Jessyca_West	2016-09-14 23:47:05	NULL	NULL	NULL	NULL
	90	Esmeralda.Mraz57	2017-03-03 11:52:27	NULL	NULL	NULL	NULL
	91	Bethany20	2016-06-03 23:31:53	NULL	NULL	NULL	NULL

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RESULT :

Contest Winner Declaration: The team has organized a contest where the user with the most likes on a single photo wins.

Your Task: Determine the winner of the contest and provide their details to the team.

SYNTAX :

```
create table count_likes
select user_id ,count(photo_id) as max_likes from likes
group by user_id
order by max_likes desc;

select * from users left join
count_likes on users.id = count_likes.user_id
order by max_likes desc;
```

OUTPUT :

	user_id	max_likes
▶	21	257
	71	257
	5	257
	66	257
	41	257
	14	257
	57	257
	24	257
	76	257
	75	257
	54	257
	91	257
	36	257

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RESULT :

Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

Your Task: Identify and suggest the top five most commonly used hashtags on the platform.

SYNTAX :

```
select tag_id , count(photo_id) as iden from tags left join  
photo_tags on tags.id = photo_tags.tag_id  
group by tag_id  
order by iden desc  
limit 5;
```

OUTPUT :

	tag_id	iden
►	21	59
	20	42
	17	39
	13	38
	18	24

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RESULT :

Ad Campaign Launch: The team wants to know the best day of the week to launch ads.

Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.

SYNTAX :

```
select week(created_at) as which_week ,  
count(weekofyear(created_at)) as weeknum from users  
group by which_week  
order by weeknum desc;
```

OUTPUT :

	which_week	weeknum
▶	18	5
	6	5
	40	4
	13	4
	27	4
	19	4
	14	3
	34	3
	23	3
	35	3
	4	3

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RESULT :

B) Investor Metrics:

User Engagement: Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.

Your Task: Calculate the average number of posts per user on Instagram. Also, provide the total number of photos on Instagram divided by the total number of users.

SYNTAX :

```
select avg(dummy) as avg_perposts from  
(select photos.user_id , count(users.id) as dummy from users left join photos on users.id = photos.user_id  
group by user_id) as dummy_col;
```

OUTPUT :

	avg_perposts
▶	3.7733

Syntax :

```
select count(photos.image_url) / count(users.id) as avgposts from users  
left join photos on users.id = photos.user_id ;
```

Output :

	avgposts
▶	0.9081

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Bots & Fake Accounts: Investors want to know if the platform is crowded with fake and dummy accounts.

Your Task: Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal users

SYNTAX :

	user_id	cnt_likes
▶	5	257
	14	257
	21	257
	24	257
	36	257
	41	257
	54	257
	57	257
	66	257
	71	257
	75	257
	76	257
	91	257

RESULT :