Instagram User Analytics

A) Project Description: This project aims to extract useful insights from raw data/metadata, using various database management tools, and even visualize them to increase the platform's efficiency.

B) Project Approach: The project was executed using SQL, where queries were utilized to create a database from the provided raw data. Sorting and data extracting queries were then implemented to obtain the required data/insights.

C) Tech Stack Used: The tech stack used included MySQL Workbench v8.0.30.0, which was an excellent tool for querying the database, thanks to its ease of access, simple setup, and GUI, as well as its troubleshooting support.

Project Insights: (Raw Insights :)A) Marketing:

1. Rewarding the most loyal users: people who had been using Instagram for long time

Conclusion: These are the five oldest users.

Darby_Herzog	2016-05-06 00:14:21
Emilio_Bernier52	2016-05-06 13:04:30
Elenor88	2016-05-08 01:30:41
Nicole71	2016-05-09 17:30:22
Jordyn.Jacobson2	2016-05-14 07:56:26

Code:

```
SELECT
  USERNAME, CREATED_AT
FROM
  USERS
ORDER BY CREATED_AT
LIMIT 5;
```

2. Reminding inactive users to start posting by sending them promotional emails.

Conclusion: These users were inactive after their first post.

Aniya_Hackett

Kasandra_Homenick

Jaclyn81

Rocio33

Maxwell.Halvorson

Tierra.Trantow

Pearl7

Ollie_Ledner37

Mckenna17

David.Osinski47

Morgan.Kassulke

Linnea59

Duane60

Julien_Schmidt

Mike.Auer39

Franco_Keebler64

Nia_Haag

Hulda.Macejkovic

Leslie67

Janelle.Nikolaus81

Darby_Herzog

Esther.Zulauf61

Bartholome.Bernhard

Jessyca_West

Esmeralda.Mraz57

Bethany20

Code:

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

3.Declaring Contest winner: where the user with the most likes on a single photo wins.

Conclusion: he has the most likes on his photo.

Zack_Kemmer93 145 https://jarret.name 48

Code:

```
SELECT
   username,
   photos.id,
   photos.image_url,
   COUNT(likes.user_id) AS total
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 DESC
LIMIT 1;
```

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

Conclusion: these are some trending hashtags

smile	59
beach	42
party	39
fun	38
concert	24

Code:

```
select tags.tag_name , count(*) as total from photo_tags
join tags
on photo_tags.tag_id=tags.id
group by tags.id
order by total desc
limit 5;
```

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

Conclusion: These days would be best for ad campaign.

Thursday	16
Sunday	16

Code:

```
select
dayname(created_at) as day , count(*) as total from users
group by day
order by total desc
limit 2;
```

B) Investor Metrics

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

Conclusion: The user posts more than 2 posts

2.5700

Code:

select

(select count(*) from photos)/(select count(*) from users) as avg;

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

Conclusion: These are the bot accounts who have liked every single post

Aniya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257
Duane60	257
Julien_Schmidt	257
Mike.Auer39	257
Nia_Haag	257
Leslie67	257
Janelle.Nikolaus81	257
Bethany20	257

Code:

```
select user_id , count(*) as num_likes from likes
group by user_id
having num_likes= (select count(*) from photos);
select u.username, count(*) as num_likes from users u
join likes l on u.id= l .user_id
group by u.id
having num_likes= (select count(*) from photos);
```