SQL Fundamentals: Instagram User Analytics

Project Description:

The goal of this project is to analyze Instagram user data and offer investors and marketing teams insightful information. Finding user patterns, behaviors, and inconsistencies that can enhance engagement, improve marketing tactics, and evaluate platform activity as a whole is the target.

We were able to extract important information on user registration, activity levels, engagement, and possible bot activities by using SQL queries on an Instagram database. In addition to giving investors data-driven figures on platform engagement, the analysis assists marketing teams in increasing user participation.

Approach:

The following are the actions we took to complete the project:

- **Knowing Business Needs:** Formulated important queries according to investor and marketing demands.
- **Data Extraction:** SQL queries were used to retrieve relevant information from several database tables.
- **Data processing:** Using joins, filters, and aggregation to extract valuable information.
- **Analyzed user activity patterns,** engagement levels, and irregularities to generate insights.

- **Actionable information for investor metrics** and marketing efforts was supplied by business recommendations.

Tech-Stack Used:

- **MySQL 8.0:** For managing databases and effectively executing queries.
- The **MySQL Workbench** offered an intuitive interface for creating and evaluating queries.

Insights:

Marketing Analysis

Loyal User Reward:

- Using the dates of registration, the five oldest users were found.
- Because of their continuous participation, these users may receive rewards.

Inactive User Engagement:

- Identified people who have never uploaded a picture.
- To promote interaction, promotional emails might be sent to these users

Contest Winner Declaration:

- Identified the person who liked a specific photo, particularly.
- The most popular photo and the winning user's information were determined.

Hashtag Research:

- Determined which five hashtags are most frequently used.
- It is helpful for brands looking to maximize the reach of their postings.

Ad Campaign Launch:

- The day of the week with the most user registrations was analyzed.
- This helps in choosing the ideal day to run advertisements for optimal exposure.

Investor Metrics

User Engagement:

- Calculated the average quantity of posts made by each user.
- To measure the growth of content, the total number of photos was divided by the total number of users.

Bots & Fake Accounts:

- Identified users who have liked each and every image on the website.
- The quality of engagement may be impacted by the likelihood that these accounts are bots.

Result:

- **Improved Marketing Strategies:** Targeted users for engagement initiatives were identified.

- **Data-Driven Investment Insights:** Offered indicators for platform growth and trends in user engagement.
- **Fraud Detection**: To increase platform authenticity, possible bot accounts were discovered.
- **Ad scheduling** was optimized by identifying the days with the highest registration rates for increased marketing effectiveness.

In addition to giving investors important performance information on platform activity, this analysis has improved Instagram's user engagement tactics.

Drive Link:

The full project, including SQL queries and results, can be accessed here:
SQL Queries_ Instagram User Analytics.pdf