**Project Description**

This project, Instagram User Analytics - SQL Fundamentals, is focused on understanding how users engage with Instagram’s platform. By tracking and analysing user activity and interaction, I set out to generate valuable business insights for the marketing, product, and development teams. These insights are used to guide decisions such as launching new marketing campaigns, choosing features to develop, monitoring user engagement, and ultimately improving the user experience while supporting overall business growth. My task was to collaborate with the product team and provide actionable answers to critical management questions using database analysis.

**Approach**

To complete this project, I first created the Instagram user analytics database using the provided scripts and data files. I then explored the database structure and content to ensure data integrity and clarity. Using SQL, I ran targeted queries to address the specific questions raised by the management. My analysis included identifying loyal and inactive users, pinpointing the most engaging content, investigating hashtag trends, and uncovering possible fake accounts. All findings were organized clearly and supported by concise SQL code examples. For clarity and impact, I presented my results in table and chart format, suitable for a leadership report.

**Tech Stack Used**

* **MySQL**: Used for creating the database and executing all SQL queries for data extraction and analysis.
* **Microsoft Excel**: Utilized for basic visualization and quick summaries based on query results.
* **PPT**: To compile the final leadership report.

**Insights**

* I found that the five oldest (most loyal) users could be identified by sorting the user table based on account creation date.
* Users who never posted were extracted using SQL joins and are ideal candidates for re-engagement campaigns.
* The contest winner - the user whose single photo received the most likes – was identified through joins and aggregation.
* I used query logic to rank and suggest the top five most frequently used hashtags across the platform.
* A simple grouping of sign-up dates by weekday revealed that Thursday is the most popular day for new users to register-making it an optimal day to launch ad campaigns.
* To measure average user engagement, I calculated the mean post count per user by dividing the total post count by total users.
* Finally, I flagged potential bots by finding users who liked every single photo on the platform-behaviour that’s extremely improbable for a real person.

**Result**

Working through this project, I strengthened my skills in database analysis and SQL querying, gained practical experience turning raw platform data into clear business recommendations, and produced a structured, actionable report. The insights drawn will help the marketing team refine their outreach, enable leadership to make informed business decisions, and ensure a healthier, more engaging platform for users and investors alike.