1. Name: Dianne Batya

2. Project Name: Analyzing User Engagement Trends

3. Link to GitHub repository: https://github.com/diannebatya/isba4715-project.git

4. Job Description
    a. Why did you select the job?

        I am interested in this role because I am passionate about using data to uncover
        insights that drive product innovation and improve user experiences, especially in
        a company that offers a service that I personally enjoy.

    b. Relevance of the job to your career goals

        This job is highly relevant to my career goals of working in a social media or
        ecommerce company and becoming a data scientist within that industry.

    c. Explanation of why the job is of interest to you

        The job is of interest to me as it allows me to use a mix of my creativity and
        technical skills to bring value to the company. Furthermore, the hybrid work
        schedule, comprehensive benefits, and TikTok's culture are additional factors that
        make this role appealing.

5. Problem
    a. The problem you plan to solve

        I plan to identify and predict user engagement trends to optimize content delivery
        and recommendations of products. By understanding what drives user
        engagement, we will be able to enhance the user experience, increase satisfaction,
        and encourage a more engaging platform.

    b. Relevance of the problem to the job

        This problem is directly relevant to the job as it involves conducting product
        analytics to provide recommendations for product growth which is one of the key
        responsibilities of the role.

    c. Feasibility of the problem to be solved with SQL and a visualization tool

The problem is highly feasible to be addressed with SQL for data extraction and manipulation as we can query large datasets to identify patterns and trends. Visualization tools like Tableau or Power BI can also be used to communicate these findings effectively to both technical and non-technical audiences.

6. Data Sources
   a. You must use two data sources, one from an API and another from a web scrape
   b. Description of the data source and the data collection method (API or web scraping)

      - API: The TikTok Developer API provides access to user engagement metrics, content performance, and user demographics.
      - Web Scrape: Scraping publicly available content rankings and user feedback on external websites to get public sentiment and trends

   c. Relevance of the data sources to the job and problem

   Both data sources are highly relevant as they offer insights into user engagement and content performance in the platform. The API will allow for real-time data access for timely analysis, while web scraping provides external perspectives on user satisfaction and content trends.

7. Solution
   a. How you plan to solve the problem with the data

   I plan to integrate data from both the API and web scraping to find insights on the user engagement trends and make recommendations. This will allow me to create a comprehensive view of user behavior, and analyze factors that boost engagement.

   b. General description of the SQL queries and visualizations used to address the problem

   SQL Queries may include CTEs, Joins, Window Functions and others to find trends and insights. Visualizations such as dashboards, heat maps or graphs may also be used to derive insights and make decisions.