Assignment: Social Media Data Analysis for Ola Cabs

Objective:
Analyze social media data to extract insights into customer sentiment, engagement, and key areas for service improvement.

Dataset Overview:

The dataset contains social media posts (tweets) related to Ola Cabs. Each entry includes details such as:

- Post content, datetime, likes, shares, views, hashtags, media links, and user details.
- Mentions and comments related to posts.
- Engagement metrics such as likes, shares, and comments.

Tasks:

1. Data Cleaning and Preparation

2. Descriptive Analysis:

- **a.** Calculate basic statistics (mean, median, mode) for the engagement metrics (likes, shares, views).
- **b.** Identify the top 5 posts with the highest engagement (likes + shares + comments).
- **c.** Count the number of posts with media attachments.

3. Sentiment Analysis:

- **a.** Perform sentiment analysis on the post content using a sentiment analysis library (e.g., TextBlob or VADER).
- **b.** Categorize posts into Positive, Neutral, or Negative sentiment.
- **c.** Calculate the percentage of posts in each sentiment category.

4. Customer Complaints:

- **a.** Extract posts mentioning complaints about drivers, booking cancellations, or customer service issues.
- **b.** Categorize these posts based on the type of complaint.
- **c.** Visualize the distribution of complaint categories using a bar chart.

5. Engagement Analysis:

- **a.** Determine the correlation between the number of followers and the engagement metrics (likes, shares, comments).
- **b.** Identify any patterns in engagement based on the source of posts (e.g., Twitter, Instagram, etc.).

6. Recommendations:

- Based on your findings, propose three actionable recommendations for Ola Cabs to improve their customer experience and social media engagement.

Deliverables:

1. A cleaned and preprocessed dataset (CSV file).
2. A Jupyter Notebook or Python script containing:
   - Data cleaning, analysis, and visualizations.
   - Insights and observations for each task.
3. A brief report summarizing:
   - Key findings from your analysis.
   - Recommendations for Ola Cabs.

Evaluation Criteria:

- Accuracy of data cleaning and preparation.
- Depth and clarity of insights derived from the analysis.
- Use of appropriate visualizations and metrics.
- Quality and feasibility of recommendations.
- Code readability and documentation.

Deadline: 05-01-2025 @ 00:00