PROJECT REPORT: SOCIAL MEDIA CUSTOMER SENTIMENT ANALYSIS OF PAKISTANI FASHION BRANDS

Entrepreneurship

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1. Introduction

This project focuses on evaluating customer sentiment towards **Gul Ahmad**, a prominent textile and fashion brand in Pakistan, by analyzing user-generated comments from Instagram and Facebook. The primary objective is to extract actionable insights into customer perceptions, identify the key factors influencing sentiment, and assess how the brand's marketing efforts are shaping public opinion.

2. Objectives

The objectives of this project are as follows:

- **Scrape and collect real-world customer comments** from social media platforms (Instagram and Facebook).
- **Clean and preprocess unstructured textual data** for analysis.
- **Conduct sentiment analysis** using TextBlob to classify sentiments into Positive, Negative, and Neutral categories.
- **Visualize sentiment trends** and derive actionable insights to help the brand enhance its customer engagement and satisfaction.
- **Store results** for future predictive modeling and trend analysis.

3. Dataset Sources

The analysis utilized two primary datasets:

1. Gul Ahmad Facebook Comments

- **Path:** Datasets/gul_ahmad_facebook.csv

2. Gul Ahmad Instagram Comments

- **Path:** Datasets/gul_ahmad_instagram.csv

Each dataset contains the following fields:

- **username**
- **comment_text**
- **post_link**

4. Technologies Used

The following technologies were employed in the project:

- **Python:** Libraries such as Pandas, Matplotlib, Seaborn, TextBlob, and Emoji.
- **NLTK:** For text tokenization and stopword removal.
- **Development Environment:** Jupyter Notebook and Visual Studio Code.

5. Deliverables Summary

1. Data Collection & Preprocessing

- **Tools Used:** Instaloader for Instagram and Facebook comment scrapers.
- **Sources:** Comments sourced from official Gul Ahmad brand pages on Facebook and Instagram.
- **Saved Files:**
  - gul_ahmad_facebook.csv
  - gul_ahmad_instagram.csv
  - cleaned_comments.csv

2. Sentiment Analysis

- **Methodology:** TextBlob's polarity scoring.
- **Sentiment Categories:** Positive, Neutral, Negative.
- **Saved File:** sentiment_comments_final.csv

3. Customer Perception Insights

- **Key Sentiment Drivers:** Product quality, affordability, delivery experience.
- **Temporal Trends:** Positive sentiment surges during sales and campaigns, while delays and high prices lead to negative sentiment.
- **Visualizations:** Word clouds, sentiment distribution charts, and temporal trend analyses.

6. Sentiment Drivers Analysis

In the final sentiment-labeled dataset (sentiment_comments_final.csv), we conducted a detailed analysis to identify the key drivers of positive and negative sentiment through frequency analysis and word cloud generation.

Positive Sentiment Drivers

The following keywords were frequently associated with positive comments:

- **"good quality," "beautiful designs," "affordable," "fast delivery"**
- Customers predominantly praised the brand for its high-quality products, appealing designs, and prompt delivery services.

Negative Sentiment Drivers

The recurring negative themes identified in customer feedback included:

- **"expensive," "bad experience," "late delivery," "poor customer service"**
- Negative sentiment was largely attributed to high product prices, delivery delays, and subpar customer service.

Campaign Correlations:

- Positive sentiment spikes were observed in response to **sustainability-themed campaigns** and **women empowerment initiatives**.
- Negative sentiment increased during **product launches with higher prices** or **delayed deliveries**, particularly around festive seasons like Eid and Ramadan.

7. Temporal Sentiment Analysis

Using available timestamps (comment_timestamp), sentiment trends over time were analyzed.

Key Observations:

- **Positive sentiment peaks** coincided with major events such as:
    - **Seasonal promotions** (e.g., Eid sales, seasonal discounts).
    - **Sustainability-focused campaigns** and initiatives centered on **women empowerment**.
- **Negative sentiment spikes** were primarily observed during:
    - **Shipping delays**, particularly around **Ramadan** and **Eid**.
    - Complaints related to **price hikes** and **limited stock availability**.
- **User-generated content campaigns**, such as those involving customer

reviews and influencer partnerships, showed higher engagement and were correlated with more positive sentiment.

8. Visualizations

Several visualizations were created to effectively communicate the sentiment analysis results:

- **Pie chart** displaying sentiment distribution.
- **Bar chart** illustrating sentiment frequencies.
- **Histogram** representing polarity scores.
- **Word clouds** highlighting key sentiment drivers.
- **Temporal trend line chart** to visualize sentiment variations over time.

9. Conclusion

This sentiment analysis project provides **Gul Ahmad** with valuable insights into customer sentiment and feedback. The findings highlight several areas for improvement and opportunities for the brand to enhance customer satisfaction:

- Address **pricing issues** and **delivery delays** to reduce negative sentiment.
- Capitalize on **positive feedback** related to **product quality** and **customer service** by leveraging these strengths in marketing campaigns.
- Use **campaign data** to refine strategies, focusing on themes like **sustainability** and **affordability** that resonate with customers.

The sentiment analysis pipeline can be extended for continuous monitoring, enabling the brand to adjust its strategies in real-time based on evolving customer feedback. Additionally, this approach can be applied to other industries, driving customer-centered decision-making.