Assignment1: Customer Feedback Analysis

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Link to video:

Recording-20240522_233903.webm

Model usage:

I did not use any model from another course. I rather valued the option to deal with an unknown problem of interest using a pre trained sentiment model from hugging face. Moreover created an own test dataset via data simulation and later tested my application with another real dataset.

1. Problem Solved by the Application

The application is designed to address the challenge of understanding and analyzing customer feedback of for example an ecommerce online store. Feedback can be a treasure trove of insights if analyzed correctly, but manual analysis is time-consuming and prone to errors. The application automates this process by categorizing feedback, evaluating sentiment, and presenting the information in a clear and actionable manner (specifically filtered and ready to download customer. This helps businesses to quickly identify areas of excellence and areas needing improvement, ultimately leading to enhanced customer satisfaction and better business performance.

2. Objective of the Application and Each Graph

Application Objective:

1. Quickly understand the general sentiment of their customers.
2. Identify key customer touchpoint areas that require attention or can be laveraged based on feedback volume and sentiment.
3. Make data-driven decisions to improve products, services, and customer support.
4. Directly take action by downloading effected customer profiles and emails

Graph Objectives:

Volume of Feedback Over Time:

Helps to identify trends and peak periods in customer feedback. By observing these trends, businesses can correlate feedback volume with specific events or changes in their operations, such as product launches or marketing campaigns.

Total Comments by Category:

Highlights which aspects of the business receive the most feedback. By identifying the categories that generate the most comments, businesses can prioritize improvements in areas that matter most to their customers.

Sentiment Trends Over Time:

Allows businesses to monitor changes in customer satisfaction. It helps in understanding how different initiatives or changes in the business impact customer sentiment over time.

Sentiment Distribution:

Provides a snapshot of the overall customer sentiment. Understanding the proportion of positive, negative, and neutral feedback helps businesses gauge general customer satisfaction and address any significant negative feedback promptly.

3. Main difficulties in streamlit

X-axis Description:

Challenge: The descriptions of the x-axis in bar and line charts were not the same, making it difficult to ensure consistent and accurate labeling across different types of graphs.

Solution: The data had to be adjusted to align the x-axis labels correctly for both types of charts. There was no possibility of alligning bar and line charts on the same date achsis, showing the limits of streamlit in graphics. I solved the using the calendar week as a common label and ensuring that the labels were readable and informative.

Custom Filter Fields:

Challenge: Adding custom fields to the filter menu was challenging because Streamlit does not provide a standard option for this functionality.

Solution: I built a workaround by adding a field that creates an additional single filter factor in to the existing main filter field -> Thats still not the optimal usecase. Because I can not add two additional filters.