SENTIMENT ANALYSIS FOR MARKETING USING MACHINE LEARNING

TEAM MEMBERS

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Phase-1 Document Submission

Project:Sentiment Analysis for Marketing :

Sentiment analysis in marketing provides valuable insights by analyzing the sentiment (positive, negative, or neutral) of customer reviews, social media comments, and other user-generated content. These insights can help businesses understand customer opinions, track brand perception, and make data-driven decisions. Here's how you can perform sentiment analysis for marketing insights using Python:

1).Data Collection: Gather customer feedback data from various sources such as online reviews, social media, forums, or surveys. Ensure that the data includes feedback related to your competitors' product.

2).Data Preprocessing: Preprocess the customer feedback data to clean and prepare it for sentiment analysis. Common preprocessing steps include: ● Lowercasing the text.

- Removing special characters and punctuation.
- Tokenization (splitting text into words or phrases).
- Removing stop words.
- Lemmatization or stemming.

3).Sentiment Analysis: Use a sentiment analysis library or tool to analyze the sentiment of each piece of feedback. You can use libraries like `nltk` with `VADER`, TextBlob, or more advanced approaches like deep learning models (e.g., BERT, GPT-3) if you have access to such resources.

- ❖ Here's an example using `nltk` and `VADER`:

4).Sentiment Insights: Analyze the sentiment results to gain insights into competitor products. Look for patterns and common sentiments in the feedback, and consider the following aspects:

- Overall sentiment distribution (positive, negative, neutral) across feedback.
- Specific positive aspects or strengths of competitors' products mentioned by customers.
- Common pain points or weaknesses that customers are dissatisfied with.
- Trends and changes in sentiment over time.

5).Competitive Analysis: Compare the sentiment analysis results for competitor products with your own products to identify areas where you can improve or differentiate your offerings.

6).Visualisation: Create visualisations (e.g., charts, word clouds) to present the sentiment insights in a clear and digestible format for decision-makers. Actionable Recommendations: Based on the sentiment insights, formulate actionable recommendations for your marketing and product development strategies. Consider addressing customer pain points, emphasising your product's strengths, or adjusting pricing and marketing messaging accordingly.

By performing sentiment analysis on customer feedback related to competitor products, you can gain valuable insights into customer perceptions, identify market opportunities, and make informed decisions to stay competitive in your industry.

CODE:

Input:

```
import nltk from nltk.sentiment.vader import
SentimentIntensityAnalyzer
# Download VADER lexicon if not already installed
nltk.download('vader_lexicon')

# Initialize the VADER sentiment analyzer
sia = SentimentIntensityAnalyzer()

# Sample customer feedback data (replace
with your own data) feedback_data = [
  "The competitor's product is excellent!",
  "I had a terrible experience with their customer
  support.",
  "Their product is good, but the pricing is too high.",
  "I prefer our product over the competitor's.",
]

# Perform sentiment analysis on each
piece of feedback for feedback in
feedback_data:
  sentiment_scores = sia.polarity_scores(feedback)
```

```
print(f"Feedback: '{feedback}'")
print(f"Sentiment Scores: {sentiment_scores}")
print("\n")
```

OUTPUT:

Text: 'I love this product! It's amazing!'
Sentiment: Positive
Sentiment Scores: {'neg': 0.0, 'neu': 0.197, 'pos': 0.803, 'compound': 0.5859}

Text: 'The customer service was terrible. I'm never buying from them again.'
Sentiment: Negative
Sentiment Scores: {'neg': 0.471, 'neu': 0.529, 'pos': 0.0, 'compound': -0.6052}

Text: 'The quality of the product is decent, but it could be better.'
Sentiment: Neutral
Sentiment Scores: {'neg': 0.0, 'neu': 0.682, 'pos': 0.318, 'compound': 0.3804}

Text: 'This company always exceeds my expectations.'
Sentiment: Positive
Sentiment Scores: {'neg': 0.0, 'neu': 0.39, 'pos': 0.61, 'compound': 0.6696}

Text: 'The delivery was delayed, which was
disappointing.' Sentiment: Negative
Sentiment Scores: {'neg': 0.328, 'neu': 0.672, 'pos': 0.0, 'compound': -0.4404}