SENTIMENT ANALYSIS FOR MARKETING

agenda

ABSTRACT

PROBLEM STATEMENT

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ABSTRACT

- Sentiment analysis is a powerful tool for interpreting consumer emotions from textual data in the digital landscape.
- It helps marketers understand customer sentiments, preferences, and perceptions, predict trends, assess brand reputation, and tailor marketing campaigns to specific audience segments.
- This research explores different sentiment analysis methods, their strengths and limitations, as well as real-world applications in market research, product development, and customer relationship management.
- The paper also examines ethical considerations and challenges associated with sentiment analysis and emphasizes the responsible use of consumer data.
- Ultimately, sentiment analysis plays a crucial role in shaping data-driven marketing strategies, fostering customer engagement, and building brand loyalty in the digital age.

PROBLEM STATEMENT

The problem is to perform sentiment analysis on customer feedback to gain insights into competitor products. By understanding customer sentiments, companies can identify strengths and weaknesses in competing products, thereby improving their own offerings. This project requires utilizing various NLP methods to extract valuable insights from customer feedback.

- Understand Customer Sentiments
- Data Collection and Sources
- Importance of Real-time Analysis
- Sentiment Analysis Technique
- .Aspects-Based Sentiments Analysis
- Sentiment -lexicons and Dictionaries
- Projective Analysis
- Brand Reputation Management
- Personalized Machine Campaigns
- Ethical Consideration
- Challenges and Limitations
- Integration with Customer Relationship Management (ICRM)
- Feedback loop and Continues improvement
- Social media Listening15.Competitor Analysis

DESIGN THINKING

DATA COLLECTION

- ✓ Marketing challenge: Gather insights from customer reviews of competitor products for marketing strategies.
- ✓ Problem definition: Need a dataset of customer reviews and sentiments about competitor products.
- ✓ Ideation: Brainstorm sources (social media, e-commerce websites, surveys), consider automation through web scraping or APIs, and ethical considerations.
- ✓ Prototype: Identify specific platforms, outline data fields, develop a collection script, and test with a small sample.
- ✓ Implementation: Execute the plan at scale with automated tools, ensure secure and ethical data storage.
- ✓ Iteration: Continuously refine the process, gather feedback, adapt the plan, and stay updated on changes.
- ✓ Scaling up: Explore additional data sources, optimize resources, and address scalability challenges.

DATA PREPROCESSING

- Clearly define the problem, which is the need to prepare textual data for sentiment analysis by cleaning and preprocessing it effectively
- Brainstorm approaches to handle common text preprocessing tasks, such as removing stop words, punctuation, and special characters.
- Consider methods for tokenization, which involves splitting text into words or phrases.
- Explore techniques for stemming or lemmatization to reduce words to their base forms.
- Think about handling issues like encoding, lowercasing, and dealing with missing data or outliers.

SENTIMENT ANALYSIS TECHNIQUES

- Clearly define the problem, which is the need to employ various NLP techniques for sentiment analysis, such as Bag of Words, Word Embeddings, or Transformer models.
- Bag of Words (BoW): Consider the traditional approach of BoW, which represents documents as a collection of words and their frequencies.
- Brainstorm ways to preprocess and vectorize text data using BoW.
- Word Embeddings: Explore the use of word embeddings like Word2Vec, GloVe, or FastText to capture semantic relationships between words.
- Think about how to leverage pre-trained embeddings or train custom embeddings on your data.
- Transformer Models: Investigate the suitability of Transformer-based models like BERT, GPT-3, or RoBERTa for sentiment analysis. Consider fine-tuning pre-trained models on sentiment-related tasks.

FEATURE EXTRACTION

- 1. Text Preprocessing: Clean and normalize text data by removing punctuation, special characters, numbers, and stop words.
- 2. Feature Extraction: Create numerical representations of text data using techniques like Bag of Words, TF-IDF, Word Embeddings, or N-grams.
- 3. Sentiment Analysis: Use pre-trained libraries or train your own classifier to assign sentiment scores or labels to the text.
- 4. Machine Learning Models: Utilize models like Support Vector Machines, Naive Bayes, or deep learning models to classify sentiment.
- 5. Evaluation and Fine-Tuning: Evaluate model performance on a testing dataset and optimize hyperparameters to improve accuracy.
- 6. Inference: Use the trained model to predict the sentiment of new text data.

VISUALIZATION

- Certainly, a common visualization for sentiment analysis in marketing is a sentiment pie chart.
- This chart categorizes customer sentiments into different segments such as positive, negative, and neutral.
- The size of each segment represents the proportion of customer responses falling into that sentiment category, providing a quick and easy-to-understand overview of the overall sentiment distribution.
- Another effective visualization is a line chart over time, showing how sentiments fluctuate in response to marketing campaigns or product launches.
- This helps businesses identify trends and patterns, allowing them to correlate specific marketing activities with changes in customer sentiment.

INSIGHTS GENERATION

- Determine overall sentiment: positive, negative, or neutral
- Analyze sentiment trends over time
- Identify the impact of events or product launches on sentiment
- Categorize sentiment by product or service
- Segment sentiment by customer demographics or user characteristics
- Compare sentiment to that of competitors
- Identify common pain points and areas for improvement
- Monitor sentiment for indicators of customer satisfaction
- Assess how sentiment affects brand perception
- Establish customer feedback loops to address negative sentiment
- Use sentiment analysis to make predictive insights
- Conduct A/B tests based on sentiment analysis.

CONCLUSION

Sentiment analysis in marketing is a powerful tool that allows businesses to gauge customer opinions, preferences, and emotions regarding their products or services

By analyzing sentiment, businesses can make data-driven decisions, tailor their marketing strategies, enhance customer experience, and foster positive brand perception.

Ultimately, sentiment analysis empowers businesses to engage with their audience more effectively, build stronger relationships, and adapt their marketing efforts to meet customer needs, thereby contributing to overall business growth and success.

TEAM DETAILS

Team Name: SMART CREW

Team Members:

MEMBER 1

NAME: GOPIKA SRI K

REGISTER NO: 312821121010

EMAIL ID: 21bme10@act.edu.in

MEMBER 2

NAME: GAYATHRI S

REGISTER NO: 312821121007

EMAIL ID: 21bme07@act.edu.in

MEMBER 3

NAME: SWETHA T

REGISTER NO: 312821121031

EMAIL ID: swethathanigai.2004@gmail.com

MEMBER 4

NAME:SHYAM SUNDAR S

REGISTER NO:312821121027

EMAIL ID:21bme31@act.edu.in

MEMBER 5

NAME: SHANMUGAPRIYA

REGISTER NO : 312821121026

EMAIL ID: Shanmugapriya786@gmail.com

Thank you