



CAPSTONE PROJECT

Airline Sentiment Analysis Using RNN

Final Project

Presented By

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PROJECT TITLE

Airline Sentiment Analysis with RNN: Enhancing Customer Experience

AGENDA

1. Problem Statement
2. Project Overview
3. End Users
4. Solution and Value Proposition
5. The Wow Factor in Your Solution
6. Modelling
7. Results



PROBLEM STATEMENT



- Leverages advanced techniques like sentiment analysis to understand passenger sentiment.
- Challenges include accurately analyzing unstructured data from social media, customer reviews, and feedback forms.
- Project aims to use Recurrent Neural Networks (RNNs) to process sequential data and classify customer sentiment.
- Aims to develop a robust model for accurately predicting and categorizing airline passenger sentiment.



PROJECT OVERVIEW



- Gather diverse sources of customer feedback like social media comments, reviews, and surveys.
- Build a Recurrent Neural Network (RNN) to analyze sentiment from text data, distinguishing between positive, negative, and neutral sentiments.
- Deploy the trained model to analyze real-time customer feedback, providing airlines with actionable insights to improve their services and enhance overall customer experience.



WHO ARE THE END USERS?



- They utilize the sentiment analysis insights to understand passenger satisfaction levels, identify areas for improvement in their services, and tailor their offerings to meet customer expectations better.
- Customer service representatives and teams within airlines can use the sentiment analysis results to prioritize and address customer complaints or concerns more effectively, leading to improved responsiveness and resolution times.
- Marketing teams can leverage sentiment analysis findings to craft targeted marketing campaigns that resonate with customer sentiments, while product development teams can use the insights to innovate and enhance products or services based on customer feedback and preferences



YOUR SOLUTION AND ITS VALUE PROPOSITION



- Utilizes Recurrent Neural Networks (RNNs) for sophisticated sentiment analysis.
- Provides insights into nuanced emotions in passenger feedback.
- Enables airlines to tailor services based on customer sentiment.
- Provides real-time insights for airlines to address customer concerns and trends.
- Allows for data-driven decision-making for continuous improvement in customer experience.
- Facilitates targeted interventions to address pain points and preferences, fostering long-term loyalty and satisfaction.

THE WOW IN YOUR SOLUTION

- Utilizes Recurrent Neural Networks (RNNs) for comprehensive understanding of passenger feedback.
- Captures full range of emotions expressed in passenger comments.
- Provides instant insights for quick action to address emerging issues or trends.
- Continuously improves services by continuously analyzing feedback.
- Aims to provide the best possible passenger experience, setting airlines apart from competitors.



MODELLING

- We gather and clean diverse data sources like customer reviews and social media comments. This includes removing irrelevant information and formatting the data for analysis.
- We train a Recurrent Neural Network (RNN) using the cleaned data. The RNN learns to understand the sequential nature of text data and categorize sentiments into positive, negative, or neutral categories.
- We assess the RNN's performance using metrics like accuracy and adjust the model as needed to improve its effectiveness in predicting passenger sentiment. This iterative process ensures our model provides reliable insights for enhancing customer experience.

RESULT

- Our RNN model accurately categorizes passenger sentiment into positive, negative, or neutral categories, providing airlines with clear insights into customer perceptions.
- Through analysis of customer feedback, our solution identifies prevalent themes and trends, allowing airlines to understand common issues and areas for improvement.
- Based on the sentiment analysis results, airlines receive actionable recommendations for enhancing customer experience, enabling them to implement targeted strategies that address specific concerns and drive overall satisfaction.

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