FILE NAME: Review_Analysis.pdf

FILE CONTENTS:

PROJECT TITLE: ForkScore

ABSTRACT: This project focuses on analyzing customer reviews using machine learning techniques, specifically employing a RoBERTa model for sentiment analysis. The application provides users with insights into the sentiment and associated emotions of the reviews they input, enhancing understanding of customer feedback.

INTRODUCTION: In today’s digital age, customer reviews play a crucial role in shaping the perception of products and services. Analyzing these reviews can provide valuable insights into customer satisfaction and areas for improvement. This project leverages natural language processing (NLP) and machine learning to automate the analysis of sentiments expressed in reviews.

METHODOLOGY:

Data Collection:

Gather customer reviews from various platforms (e.g., Amazon, Yelp, Zomato) or dataset from various platforms like Kaggle etc .

Preprocess the text data to remove noise and standardize formats.

Model Selection:

Utilize the RoBERTa model, a transformer-based architecture, for sentiment classification.

Fine-tune the model on a labeled dataset of reviews.

Implementation:

Develop a Streamlit application to allow users to input review text.

Integrate the trained RoBERTa model to analyze the sentiment of the input reviews.

Review Analysis:

Classify reviews into three categories: Positive, Neutral, and Negative.

Provide confidence scores and associated emotions for each classification.

RESULTS:

The application successfully analyzes review text and presents the sentiment along with confidence levels.

Users receive feedback in the form of primary sentiment, associated emotions, and visual confidence distributions.

CONCLUSION:

This project demonstrates the effectiveness of machine learning techniques in sentiment analysis of customer reviews. The developed application serves as a useful tool for businesses to gauge customer sentiment and improve their offerings based on feedback.

FUTURE WORK:

Explore the incorporation of aspect-based sentiment analysis to identify specific features influencing customer opinions.

Enhance the model with additional data to improve accuracy and robustness.

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