

# Enhancing Financial News Sentiment Analysis Using Natural Language Processing Techniques

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## **Abstract**

This research examines the use of Natural Language Processing (NLP) for sentiment analysis of financial news and its potential applications in the financial industry. The study focuses on how NLP can be utilized in the banking sector to analyze financial news articles. A comprehensive literature review is conducted to highlight the limitations and issues of NLP-based sentiment analysis. The study includes case studies of financial organizations and academic institutions that have successfully used NLP to analyze the emotional content of financial news, detailing both results and obstacles encountered. Recent advancements in NLP, such as deep learning, are explored to address the limitations of traditional techniques, especially when financial news is nuanced and open to multiple interpretations. The study also covers the trend of monitoring social media for financial sentiment research, emphasizing its potential to provide real-time insights into public sentiment about financial products or firms. The findings suggest that NLP can significantly improve the efficiency and precision of financial news sentiment analysis, although further research and development are necessary to overcome existing limitations and enhance accuracy.

## **Keywords**

Natural Language Processing, Financial News, Sentiment Analysis, Deep Learning, Financial Markets, Social Media, Real-Time Analysis, Machine Learning