

# Sentimental Analysis using Neural Network

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**Abstract:** *This paper presents a comprehensive exploration of sentiment analysis using neural networks, focusing on architectures like RNNs, LSTMs, and transformers. Key findings include an in-depth analysis of model effectiveness, challenges in training data, and ethical considerations. The survey showcases the prominence of RNNs in capturing nuanced sentiment patterns, offering valuable insights for researchers and industry practitioners. Methodologically, dataset curation, preprocessing, and ethical considerations are discussed, culminating in a systematic approach to sentiment analysis. The model's applications span customer feedback, brand monitoring, market research, political sentiment analysis, healthcare feedback, content moderation, financial sentiment analysis, and educational feedback analysis. The paper concludes with a significant contribution to the evolving landscape of sentiment analysis, emphasizing the integration of neural networks for a deeper understanding of human sentiment.*

**Keywords:** Sentiment analysis

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