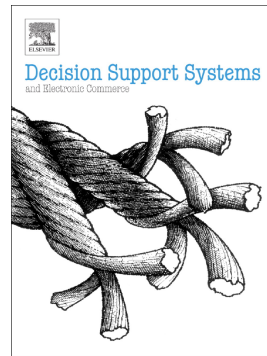


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Deep Neural Networks Understand Investors Better

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Abstract

Studies that seek to examine the impact of sentiment in financial markets have been affected by inaccurate sentiment measurement and the use of inappropriate data. This study applies state-of-the-art techniques from the domain-general sentiment analysis literature to construct a more accurate decision support system that generates demonstrable improvement in investor sentiment classification performance compared with previous studies. The inclusion of emojis is shown significantly improve sentiment classification in traditional algorithms. Moreover, deep neural networks with domain-specific word embeddings outperform the traditional approaches for the classification of investor sentiment. The approach to sentiment classification outlined in this paper can be applied in future empirical tests that examine the impact of investor sentiment on financial markets.

Keywords: Investor Sentiment, Domain-specific, Emojis, Deep Neural Network (DNN), Word Embeddings, StockTwits

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