Paper Title:
Sentiment Analysis on Movie Review Data Using Machine Learning Approach

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1 Summary

1.1 Motivation

The motivation comes from understanding the sentiment in the movie reviews. In such a sector like movies, reviews help people make decisions if they will watch the movie or not. Reviews by others who have already watched the movies, come in handy to understand how the movie is. But reading all the review's manually is not always the best way to go. Hence, the system saves the day by classifying and analysing the reviews using Machine Learning Approach.

1.2 Contribution

The paper contributes by using five different classifiers on the movie reviews which are Decision Tree, SVM(Support Vector Machine), Bernoulli Naive Bayes, Multinomial Naive Bayes and Maximum Entropy. It shows the performance through accuracy, precision, recall and F1-score.

1.3 Methodology

It collects movie review data and preprocesses the data. The preprocessing includes URL removal, Tokenizing and Stemming. After that the feature vectors are created. Also, the machine learning classifiers are trained and tested. Then, to determine the effectiveness of the sentiment classification, the classifiers' performances are analysed.

1.4 Conclusion

The paper mentions the Multinomial Naive Bayes achieved the highest accuracy of 88.50%.The rest of the paper's accuracy order(descending) is: Bernoulli Naive Bayes, SVM, Decision Tree and Maximum Entropy. The paper shows the importance of feature selection and parameter optimization in order to improve classifiers' performance. It also suggests the future work to use deep learning approaches to improve the classifier further.

2 Limitations

2.1 Limited Feature set and Classifiers

The paper relies heavily on a small feature set. This could affect the model's performance as with more feature sets, we can analyse the sentiments of reviews better.

2.2 Lack of Comparative Analysis

Although the paper compares different classifiers, it lacks deep learning methods. Using Deep learning methods we could understand the sentiments of the movie reviews better.

3 Synthesis

The future researches could explore a bit more complex and interesting aspects like detecting sarcasm, happy, unhappy etc mood of reviewer. They can also work on better accuracy and make it more applicable. Scale up the research by using the advanced deep learning technologies like NLP, LSTM etc. Furthermore, analysing the different processing techniques and optimising different parameters could improve the research. In a nutshell, The future researchers could work on making the research more effective and and more applicable in different sectors of real-world scenarios.