

## Performance Analysis with the Combination of Visualization and Classification Technique for Medical Chatbot

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**Abstract :** Natural Language Processing (NLP) continues to play a strategic part in complaint discovery and medicine discovery during the current epidemic. This abstract provides an overview of performance analysis with a combination of visualization and classification techniques of NLP for a medical chatbot. Sentiment analysis is an important aspect of NLP that is used to determine the emotional tone behind a piece of text. This technique has been applied to various domains, including medical chatbots. In this, we have compared the combination of the decision tree with heatmap and Naïve Bayes with Word Cloud. The performance of the chatbot was evaluated using accuracy, and the results indicate that the combination of visualization and classification techniques significantly improves the chatbot's performance.

**Keywords :** sentimental analysis, NLP, medical chatbot, decision tree, heatmap, naïve bayes, word cloud

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