

# ANALYSIS OF HOSPITAL SERVICE SATISFACTION LEVELS USING THE NAÏVE BAYES MULTINOMIAL CLASSIFIER ALGORITHM (CASE STUDY: RSKIA SADEWA, SLEMAN)

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## ABSTRACT

Patient satisfaction is a crucial indicator in evaluating the quality of services at hospitals. To measure service quality, Sadewa Special Hospital for Mothers and Children (RSKIA) has implemented a patient satisfaction survey system through a provided survey website. However, issues arise with the collected data, as the evaluation of service results is currently performed manually, which hampers effectiveness and efficiency and is prone to errors. Therefore, this study conducts sentiment analysis on patient satisfaction survey data from Sadewa Special Hospital for Mothers and Children in Sleman, utilizing a machine learning approach with the Multinomial Naive Bayes Classifier algorithm. The data used in this study consists of 330 survey responses, divided into 231 training data and 99 testing data. The study includes data preprocessing, model training, model testing, and performance evaluation. The testing results show that the Multinomial Naive Bayes Classifier model achieved an accuracy of 96.97% on the training data and 86.87% on the testing data. Based on the evaluation results, all features functioned properly. Moving forward, system development can be enhanced by improving model quality through the use of appropriate data handling techniques and exploring other algorithms to achieve optimal results.

**Keywords:** Multinomial Naive Bayes Classifier, patient satisfaction, sentiment analysis, RSKIA Sadewa