

ABSTRACT

SENTIMENT ANALYSIS OF TWITTER USERS ON THE LEGALIZATION OF MEDICAL CANNABIS USING NAÏVE BAYES METHOD AND LEXICON BASED FEATURES

Oleh
Reynaldo Berluskoni Girsang
NIM 18102139

This study applies the Naïve Bayes method combined with a lexicon-based approach to analyze public sentiment on Twitter regarding the legalization of medical cannabis. Cannabis (Cannabis) contains Δ 9-tetrahydrocannabinol (THC) and cannabidiol (CBD), yet it remains classified as a Schedule I narcotic in Indonesia, sparking debate over its medical potential. This research addresses a gap in studies focusing specifically on public opinion about the legalization of medical cannabis. The results indicate that the Naïve Bayes model with a lexicon-based approach achieves an accuracy of 62.72%. Although the negative class achieves a recall of 100%, this highlights the model's tendency to classify more data as negative. The positive class achieves 100% precision but only 4% recall, leading to a high rate of misclassification for positive data. The neutral class also exhibits a low F1-score (4%), revealing weaknesses in detecting neutral sentiment accurately. These findings underscore the need for more comprehensive natural language processing techniques to differentiate various sentiments. Overall, this study aims to inform the development of more robust sentiment analysis models and provide valuable insights for policymakers and stakeholders in understanding public opinion dynamics surrounding medical cannabis legalization.

Keywords: Cannabis, Classification, Lexicon Based, Medical, Naïve Bayes Classifier