

Abstract:

Nowadays, social media twitter is popular media for news dissemination. News has elements that can be distinguished types of news, such as hoax that has elements of panic, worry, and anxiety that can have a significant impact in various fields of social, economic, educational, and political. Hoax prevention efforts need as possible before news viral, by to be developed method with functions to identify and hoax analyze. in this research we have proposed an approach Machine Learning with method Support Vector Machine (SVM) supported by feature selection Information Gain (IG) added Term Frequency–Inverse Document Frequency (TF-IDF) for word weighting system performance is very optimal in increasing accuracy by 37,51%, with accuracy reaching 96.55%.

Keywords: *Support Vector Machine, Information Gain, TF-IDF, Hoax, Non-Hoax*