

Detecting Cyberbullying, Spam and Bot Behavior and Fake News in Social Media Accounts Using Machine Learning

Authors : M. D. D. Chaturangi, M. G. K. Nayanathara, K. M. H. M. M. Gunapala, G. M. R. G. Dayananda, Kavinga Yapa Abeywardena, Deemantha Siriwardana

Abstract : Due to the growing popularity of social media platforms at present, there are various concerns, mostly cyberbullying, spam, bot accounts, and the spread of incorrect information. To develop a risk score calculation system as a thorough method for deciphering and exposing unethical social media profiles, this research explores the most suitable algorithms to our best knowledge in detecting the mentioned concerns. Various multiple models, such as Naïve Bayes, CNN, KNN, Stochastic Gradient Descent, Gradient Boosting Classifier, etc., were examined, and the best results were taken into the development of the risk score system. For cyberbullying, the Logistic Regression algorithm achieved an accuracy of 84.9%, while the spam-detecting MLP model gained 98.02% accuracy. The bot accounts identifying the Random Forest algorithm obtained 91.06% accuracy, and 84% accuracy was acquired for fake news detection using SVM.

Keywords : cyberbullying, spam behavior, bot accounts, fake news, machine learning

Conference Title : ICMLC 2024 : International Conference on Machine Learning and Cybernetics

Conference Location : Venice, Italy

Conference Dates : June 20-21, 2024