ABSTRACT

Personality provides a deep insight of someone and has an important part in someone's job performance. Predicting personality through social media has been studied on several research. The problem is how to improve the performance of personality prediction system. The purpose of this research is to predict personality on Twitter users and increase the performance of the personality prediction system. An online survey using Big Five Inventory (BFI) questionnaire has been distributed and gathered 295 Twitter users with 511,617 tweets data. In this research, we experiment on two different methods using Support Vector Machine (SVM), and the combination of SVM and BERT as the semantic approach. This research also implements Linguistic Inquiry Word Count (LIWC) as the linguistic feature for personality prediction system. The results showed that combination of these two methods achieve 79.35% accuracy score and with the implementation of LIWC can improve the accuracy score up to 80.07%. Overall, these results showed that the combination of SVM and BERT as the semantic approach with the implementation of LIWC is recommended to gain a better performance for the personality prediction system.

Keywords: *Big Five Personality, BERT, SVM, LIWC*