

ABSTRACT

A patient who has dental health problems usually needs assistance on determining the most suitable dental specialist, due to their unfamiliarity with the dental field. Patients need to express the symptoms usually in a natural language text before being recommended to visit a dental specialist. This study proposes a system to classify the dental patient complaints based on the most suitable dental specialist. The problem is tackled as a text classification involving the following methods: CNN, Bi-LSTM, and Multinomial Naïve Bayes. The dataset used contains 2199 items and the experimental results show that the model with the best performance is the combination of GloVe and CNN outperforms Bi-LSTM with Attention layer and Multinomial NB with score accuracy, precision, recall, and F1 score respectively 66% for each of them.

Keywords: dental patient chief complaint, long short-term memory, text classification, Naive Bayes, convolutional neural network;