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| Abstract |  |
| In recent years, people are showing eagerness for expressing their opinion on online products, tourism services, E-governance services through social networking sites, blogs, e-commerce websites, and etc. In every second, tremendous amounts of data are being produced on these platforms. Currently, 265 million native and non-native speakers across the world use Bangla as their communication language. As a result, digital content with Bangla texts in WWW is growing very rapidly. Nonetheless, due to its complex syntactic structure and an inadequate number of Bangla tools for Natural Language Processing, research on extracting meaningful information is becoming a challenging area for researchers. In this paper, we contribute by providing a prediction model through a comparison based study for classifying positive and negative Bangla reviews. To do so, at first, we’ve accumulated a substantial dataset consisting of e-commerce reviews, written in Bangla language. We’ve applied various machine learning algorithms such as Support Vector Machine, Random Forest, Logistic Regression Classifier, Multinomial Naive Bias, and Extreme Gradient Boosting. Four separate feature engineering techniques are applied to identify the best case. Furthermore, we’ve also applied state-of-the-art deep learning techniques such as ANN, GRU, and LSTM. Finally, we provide a comparative result through the rigorous experiment. We declare Support Vector Machine algorithm along with character-level feature extraction as effective means to classify polarity of Bangla e-commerce reviews since this combination achieved 89% F1-score in our experiment. | |