Abstract

This research proposes the development of Neural Machine Translation (NMT) for Indonesian - Javanese translation using Convolutional Neural Network (CNN) approach. This step is taken as an effort to maintain the sustainability of regional languages in the midst of increasingly strong globalization. With a focus on Indonesia's cultural diversity, this research integrates NMT technology as an innovative solution to keep regional languages alive. In addition, an attention mechanism is applied to improve the efficiency and accuracy of the translation produced by the model. Evaluation is conducted using BLEU score to provide a more comprehensive understanding of the success of this model. The implementation of this technology is expected to make a positive contribution in preserving and increasing appreciation of the Javanese language, while strengthening the cultural identity of the Javanese people. The experiment results show that the developed model is able to achieve a BLEU Score of 53.10%, which indicates a fairly good level of translation accuracy.

Keywords: Neural Machine Translation, Javanese Language, Convolutional Neural Network, BLEU score