ABSTRACT

Indonesia, with its abundant natural resources, is rich in captivating tourist attractions. Tourism, a vital economic sector, can be significantly influenced by digitalization through social media. However, the overwhelming amount of information available can confuse tourists when selecting suitable destinations. This research aims to develop a tourism recommendation system employing content-based filtering (CBF) and hybrid Bidirectional Long Short-Term Memory Feed-Forward Neural Network (BiLSTM-FFNN) model to assist tourists in making informed choices. The dataset comprises 9,504 rating matrices obtained from tweet data and reputable web sources. In various experiments, the hybrid BiLSTM-FFNN model demonstrated superior performance, achieving an accuracy of 93.36% following optimization with the Stochastic Gradient Descent (SGD) algorithm at a learning rate of about 0.193. The accuracy, after applying Synthetic Minority Over-sampling Technique (SMOTE) and fine-tuning the learning rate hyperparameter, showed a 14.3% improvement over the baseline model. This research contributes by developing a recommendation system method that integrates CBF and hybrid deep learning with high accuracy and provides a detailed analysis of optimization techniques and hyperparameter tuning.