Abstract

Indonesia is one of the countries with the highest confirmed cases of COVID-19. The city of Bandung is an area in Indonesia where the number of confirmed cases have continued to increase from 2021 to 2023. Currently there are around 103,574 cases with a total of deaths of around 1485 people. This is bad news for the city of Bandung because of the increasing number of confirmed cases. Various precautions against factors that might affect the rapid spread of COVID-19 in the city of Bandung have been carried out. But the confirmation cases still can't be stopped. Therefore, in this study we made a classification of the spread of COVID-19 in the city of Bandung with 25 features which later be expanded using feature expansion techniques. This aims to analyze what factors have a major influence on the spread of COVID-19 in the city of Bandung. The method used are ANN and RNN methods. Where in this study the two methods were compared to determine which model had the best performance. Modeling is done by building models 2, 3, 4, and 5 months then the best model accuracy results from the ANN method are 79% and 81% for the RNN method. The author's contribution in this research is to build 2, 3, 4, and 5 month models, compare the performance results of ANN and RNN models, analyze the results of the confusion matrix, and make conclusions about what features are often used in each modeling.

Keywords: artificial neural network, recurrent neural network, accuracy, covid-19, feature expansion.