Estimation of Closed Hotels and Restaurants in Jakarta as Impact of Corona Virus Disease (Covid-19) Spread Using Backpropagation Neural Network

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Abstract: Corona Virus Disease (Covid-19) has become the focus of world attention because it attacked many people in the world and many people died. The effect of Covid-19 is not only on the health of people, it is negatively affecting all aspects of life including the social area, economy, sport, and tourism. Hotels and restaurants that are an important part of the tourism industry have got a big negative impact from Covid-19. Since this disease has spread in many countries including Indonesia, the Indonesian goverment adopted regulations to close the hotels and restaurants to prevent the spread of Covid-19. This research comes from the need to find out the estimated number of hotels and restaurants to be closed due to Covid-19. The estimation method will involve the Backpropagation Neural Network. The Backpropagation Neural Network can make estimation of the number of closed hotels and restaurants approaching the target. Simulations are applied by splitting the dataset into training data (80%) and testing data (20%). From Backpropagation Neural Network simulations, the Backpropagation Neural Network can make estimation of the number of closed hotels and restaurants in training data with optimal RMSE being 9.2422 and testing data with optimal RMSE being 8.9419.

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