



PROJECT REPORT
COMPARISON BETWEEN LONG
SHORT- TERM MEMORY (LSTM) AND AUTOREGRESSION
TO PREDICT TEMPERATURE

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ABSTRACT (ABSTRACT TITLE)

Climate change affects people, particularly those living in underdeveloped countries who depend on agriculture and fisheries. To lessen the effects of climate change, a prediction of the weather is needed. Future prediction is made possible by the application of statistical methods. Long Short-Term Memory (LSTM) and Autoregression are two methods that can be used to predict weather. My study is on the comparison between the use of LSTM and autoregression to predict future temperatures. The purpose of my study is to find out which method is better at predicting the weather. The test used 3000 data as a sample data set. Before the data was used, I processed the data and used only the necessary components of the algorithm. I then divided the data into training data and test data. The ratios of the divided data were 80/20, 70/30, and 60/40 to determine the effectiveness of the algorithm. The data taken for training and testing were sufficient to form a conclusive model that could predict climate change efficiently. The finding is that LSTM is more accurate at predicting the temperature with average error of 5 degree celsius compared to Autoregression of 8 degree celsius. This conclude that LSTM is superior compared to Autoregression.

