

Weather prediction in Kota Kinabalu using linear regressions with multiple variables

ABSTRACT

Weather prediction is a scientific and technology application that predicts the weather condition of the atmosphere in a certain area. Numerous weather prediction models have emerged due to the expanding research in the disciplines of artificial intelligence and machine learning. However, the difficulty of correctly forecasting or predicting the weather continues to exist. Numerical weather prediction is the process of using existing numerical data on weather conditions to forecast the weather using machine learning algorithms. This study employs machine learning algorithms, a linear regression model using statistics, and two optimization approaches, the normal equation approach, and gradient descent approach to predict the weather based on a few variables. The root mean square error is used to compare the performance of the algorithms. The findings showed that the normal equation technique anticipates the weather with a high degree of accuracy, but the gradient descent technique predicts the low degree of accuracy.