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## Prediction of monthly rainfall at SENAI, Johor using artificial immune system and deep learning neural network (Article)

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### Abstract

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In order to obtain good accuracy for the prediction of rainfall, this paper developed the Clonal Selection Algorithm (CSA) as a model for monthly rainfall prediction at Senai, Johor, Malaysia. CSA is one of the main algorithms in the Artificial Immune System. The results were compared with an established model for prediction which is the deep Multilayer Perceptron (MLP) algorithm. MLP is a deep learning algorithm used in the Artificial Neural Network (ANN). The algorithms were modelled using rainfall historical data with four input meteorological variables which are humidity, wind speed, pressure and temperature over the period of 1987 to 2017. The result shows that CSA obtained better prediction accuracy compared to MLP. CSA was applied successfully for the prediction of a continuous time series data with a high variable in nature. © 2020 Mattingley Publishing. All rights reserved.

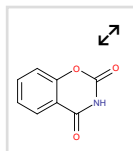
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