Abstract

With nearly 30,000 cases reported annually all over the island, Dengue fever has become a major health hazard in Sri Lanka over the past few years. This research attempts to develop an Artificial Neural Network (ANN) to predict Dengue outbreaks. The study investigates the effects of weather variables and previous Dengue cases on the current Dengue cases. The weather variables, Average Temperature, Average Relative Humidity, Rainy Days per Week, Total Rainfall and the Previous Cases are identified with a time lag as input parameters to the ANN. The parameters and the specific time lags are defined by a correlation analysis between each individual variable with current Dengue cases. The ANN developed as an outcome of this research is capable of predicting Dengue outbreaks in Kandy district in Sri Lanka with fairly good accuracy.

Index Terms

Computer Science  
Artificial Intelligence

Keywords

Artificial Neural Networks   Multi Layer Perceptron Networks   Predicting Dengue Outbreaks
Effect of weather variables on Dengue