Abstract

Self-organizing map (SOM) is applied to deal with missing daily rainfall data with different rainfall patterns in Peninsular Malaysia. In this study, stations from Damansara and Kelantan are focused and aimed to evaluate the effectiveness of SOM in clustering and imputation of missing data. The missing data that are imputed by SOM are evaluated by computing the mean square error (MSE) and coefficient correlation (R). Besides, the effects of the imputed data to the mean and variance of the rainfall data is also been observed. The clustering analysis showed that all the stations in Damansara are grouped distinctively, and having a good and even distribution of rain intensity as compared to Kelantan. Meanwhile it is also found that SOM is an excellent tool in estimation of missing data.

References

- Kalteh, A. M. and Hjorth, P. 2009. Imputation of Missing Values in a Precipitation
Index Terms

Computer Science  
Artificial Intelligence

Keywords

Self-organizing Map (som)  Missing Values