

PREDICTION OF PM10 AND SO₂ CONCENTRATIONS IN AMBIENT AIR USING ARTIFICIAL NEURAL NETWORKS FOR HYDERABAD

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ABSTRACT

An Artificial Neural Networks (ANNs) models are constructed to predict PM10 and SO₂ concentrations for Hyderabad. The model uses meteorological variables like wind speed, wind direction, temperature, relative humidity and atmospheric pressure as input variables. Three models have been developed one is for the prediction of PM10 using meteorological parameters, second one is for the prediction of SO₂ using meteorological parameters and particulate matter concentrations and the third one is for the prediction of PM10 and SO₂ using meteorological parameters as input variables. The correlation coefficient between observed and predicted concentrations are in the range of 0.982 to 0.962. The evaluation of models results shows that the degree of success in PM10 and SO₂ concentration are seems to be good.

KEYWORDS: Artificial Neural Networks