Environmental Engineering and Management Journal

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ASSESSMENT OF GRADIENT BOOSTING ALGORITHMS FOR PHOTOCHEMICAL OZONE LEVELS IN BHOPAL

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Abstract

Ozone (O_3) is a air pollutant having very harmful effect on human as well as environment. So, it is a necessity to develop O_3 prediction model for its correct prediction according to air pollution and meteorological parameters of Each locality so it will help policy makers and authorities to make appropriate decisions. In this study comparison of O_3 prediction model is done which are developed according to the data set available in Bhopal city data stations (air pollution data is taken from Central Pollution Control Board's Station TT Nagar (Tatya Tope Nagar) and Meteorological data has been taken from Bhopal Airport weather station). Comparison is shown between the Light Gradient Boosting Machine (LightGBM) and eXtreme Gradient Boosting (XGBoost or XGB) based models. In which XGB performs better than LightGBM.

Keywords: bhopal, lightgbm, modelling, ozone, XGB

Received: February, 2025; Revised final: January, 2026; Accepted: February, 2026

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