Spatial-Temporal Prediction of PM2.5 concentration in North China Plain Using the Machine Learning

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Abstract: In this study, we used the outputs of Community Multi-scale Air Quality Modeling (CMAQ) system, Aerosol Optical Depth (AOD) and the weather information to forecast the PM2.5 concentration in North China Plain. We compare the Linear Regression, SVM, Random Forest et al. machine learning methods in this study. Some deep learning algorithms are also implemented. The machine learning methods show promising performances.