5.044 Development of a statistical model for PM10 prediction.

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Abstract:

A statistical model was developed to predict mixing ratios of PM_{10} by embedding deep LSTM (Long Short-Term Memory) layers. Information of atmospheric pollutants and meteorological parameters over Seoul Metropolitan area was collected and pre-processed to train and validate the developed model from 2014 and 2016. The modeled PM_{10} mass densities show reasonable agreements with those for observed, with Pearson correlation coefficient (R) of 0.736. More detailed results of PM_{10} forecasting were also discussed together with some limitation of current PM_{10} prediction model.