

Response to Editor: We are grateful to the editor for their diligent review of this article once again.

Our Reply follows (*the editor's comments are in italics and blue*)

General Comments

Many thanks for the revised manuscript. There are just a few minor points that need additional attention:

Minor comments

The newly added short introduction of the RFSML is very welcome, but I would like to ask you to check and revise the corresponding text on page 7. The first new sentence, lines 13 to 17, appears to be grammatically incomplete and is also quite long. Moreover, important information such as the type of ML model used is missing.

Reply: Thanks for the comments. The long sentence is revised by ***“The common machine learning prediction process involves several steps. Firstly, it requires data collection of PM_{2.5} observations and datasets. Next, data interpolation should be conducted to address missing values in the original dataset. Following that, an appropriate machine learning model must be selected. Additionally, the continuous data time series should be reformed into the required input structure. Then, the model is repeatedly trained to determine optimal hyperparameters. Finally, predictions can be made using the trained model. In addition to these procedures, the RFSML utilized ensemble SAGE to obtain the optimal input feature subsets instead of using all related features.”*** in page 7, lines 13-19. Information concerning the type of ML model is now added in page 7, line 26 and page 8, lines 1-2 by saying ***“The forecast predictor F represents the machine learning model. In RFSML, three machine learning models, namely random forest, gradient boosting, and multi-layer perceptron (MLP), are employed. The prediction results obtained from MLP are directly utilized as this work’s RFSML prediction.”***

Minor comments

Page 2, line 22: Please expand SAGE (in parenthesis).

Reply: The full name (***Shapley additive global importance***) of SAGE has been added in parentheses.

Page 13, lines 5, 6, 8: Consistent with the renaming elsewhere, please change "forecast" to "prediction".

Reply: Corrected.