

Drink. Water Eng. Sci. Discuss., author comment AC3
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Reply on CC1

Ahmad Ravanbakhsh et al.

Author comment on "Implementing and evaluating various machine learning models for pipe burst prediction" by Ahmad Ravanbakhsh et al., Drink. Water Eng. Sci. Discuss., <https://doi.org/10.5194/dwes-2021-7-AC3>, 2021

Manuscript in the present version contains several problems. Appropriate revisions should be undertaken in order to justify recommendation for publication. It is mentioned that LSSVM and M5TREE models are used. What are the advantages of adopting these particular methods over others in this case? How will this affect the results? More details should be furnished.

Response:

In this article, 5 artificial intelligence models among the prominent methods of machine learning have been examined and their performance has been compared with each other. It's not clear for authors, why did the esteemed reader separate the two models from the 5 models? While all 5 models are compared simultaneously. Also please specify where more details are needed.

Why not tried MARS/OP-ELM/DENFIS/GMDH for comparison and validation?

Response:

There are many machine learning methods in published scientific articles. Every researcher is interested in a number of them and conducts their research based on them. Although MARS was used in this article, 5 new artificial intelligence methods have been used that RCNN-SVR has not used before. It's not possible to implement many artificial intelligence methods in an article. As you know, researchers compare just two or three methods in their study. The mentioned methods by esteemed reader can be used in future articles.

For readers to quickly catch your contribution, it would be better to highlight major difficulties and challenges, and your original achievements to overcome them, in a clearer way in abstract and introduction.

Response:

Due to the obsolescence of the studied water network and the lack of pipe failure statistics in recent years, the number of our input data has been limited and the main challenge facing the authors in this article is to find a suitable machine learning model that can provide accurate answers with low data. Now, this issue can be added to the article in the next revision if the referees and the editor agree.