

Interactive comment on “Improved logistic regression model based on a spatially weighted technique (ILRBSWT v1.0) and its application to mineral prospectivity mapping” by Daojun Zhang et al.

Anonymous Referee #2

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The manuscript presents something that is technically sound. So it can be accepted for publication after addressing the following comments:

The English needs to be improved. It has not been structured well. The statements and propositions have not been organized properly. Reflecting the state of the art is poor as well. The Introduction has not properly been tightened, so the problem and the purpose are not clear.

In Fig. 8, two different data sets were bound together and can explicitly be separated

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by a horizontal line. I think there is something wrong. Perhaps it would be better that the two data sets (A and B) be gridded by the same cell size and the spatial values should not be modeled/mapped individually. You should generate a model similar to the Fig. 5.

Weighted evidence layers must be added to the manuscript.

The manuscript presents lack of a Discussion section.

The methods applied, i.e. “weights of evidence” and “logistic regression” are data-driven MPM methods, which carry exploration bias and uncertainty resulting from using classified spatial data and location of known deposits as training sites. Please add a discussion on the disadvantages of such data-driven MPM methods. There are continuous weighting approaches using logistic functions (e.g., logistic-based weighting methods, geometric average function, continuous fuzzification method, and ...) to avoid the aforementioned uncertainty.

The evaluation method applied could not reflect the efficiency of the two models adequately. So you can see that there is no much difference between the models. I think it would be better if you could apply a prediction-area (P-A) plot and calculate normalized density for the two models to compare them.

The Conclusion is somewhat repetition of the text body. Please re-think about the Conclusion.

Good luck!

Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2017-278>, 2018.

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