

Interactive comment on “An integrated user-friendly ArcMAP tool for bivariate statistical modeling in geoscience applications” by M. N. Jebur et al.

Anonymous Referee #2

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General Comments: Authors add bivariate statistical modules to Arcgis using the python language. This GIS tool includes three models: evidential belief function (EBF), frequency ratio (FR) and weights-of-evidence (WoE). They are all data-driven techniques aiming to predict the hazard susceptibility and other geoscience applications. Such tool can assist geo-scientists in performing statistical analyses in the GIS environment since its procedure is simple and efficient. However this module could be improved by following:

(1) The Area Under Curve (AUC) should be calculated in the ArcMAP tool so that three models can be compared directly in ArcGIS. (2) It would be better to provide the functions that could select the ratio of training set to the testing set. It will be
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convenient for users to test the models. (3) It would be better to provide functions for testing the modeling results. For example, the Bootstrapping (statistics) approach can be adopted. This method allows assigning measures of accuracy (defined in terms of bias, variance, confidence intervals, prediction error or some other such measure) to sample estimates. It will facilitate selecting the model and judging the modeling results judge.

Specific comments: There are also some typos or grammar problems in the MS. For example: (1) On page 7241, line 18, 'is' should be deleted. (2) On page 7246, line 25, the equation (2) was wrong.

Interactive comment on Geosci. Model Dev. Discuss., 7, 7239, 2014.