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Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	Ms_BJAST_30676
Title of the Manuscript:	New Efficient Machine Learning Algorithm to Solve Facility Location Selection Problem of Geoinformatics
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments	The paper is not written well and contains confusing information in some places. Below are some of the concerns with the paper. A model is presented but not the actual algorithm which was coded to implement the model. The model does not reveal all the computational complexity of the proposed technique but an algorithm does. It is stated in the paper on page 8 that "For the given dimensions of the facility location problem, the model solving time is negligible, and it is within 1 min for 10 existing and 5 potential sites. However, the model solving time can be very long for an increased number of existing and potential facility location problem." This statement about time complexity is neither sufficient nor convincing. The algorithm which was developed, based on the model, needs to be presented in order to better understand the complexity of the work, both logically and computationally. For time complexity, at least the theoretical analysis (based on worst case) of the algorithm, though inclusion of both theoretical and experimental analyses would even be better, need to be discussed. The "Experimental results and discussions" section is confusing. On page 8, it is not clear from this statement "Notice that existing locations are ranked from best to worst based on five criteria with the aid of expert analysts form the investigated store." that whether what "expert analysts" selected were used as a baseline to	First of all, please know that I appreciate very much your suggestions and advices. I was gladly surprised to see this since my colleague and I are currently working on it as stated in the conclusion section of the paper. Yes, the model solving time can be very long for an increased number of existing and potential facility location problem. This work is by no means exhaustive of the method discussed here. We recognize that improvements have to be done both on the algorithm (different regularizer properties must be investigated) and the model applications. More detailed work is needed to improve the effectiveness of the numerics in general. Also, the answer to exactly how sensitive the method is to moderate amounts of noise should be investigated. Therefore I could not see how to add these without unduly complicating the present paper. Second, the linearization method led us to a Fredholm integral equation of first kind with Riesz kernel. Since this equation represents an ill-posed problem, we needed some kind regularization method to overcome this difficulty. We used the Tikhonov regularization method and, by discretizing the regularized equation, ended up with the system of linear equations. With this enhancement, now the problem is reduced to solving systems of linear



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	compare the results or for supervising the algorithm. The algorithm is claimed to be unsupervised. On page 13, at the end of the “Concluding Remarks” section, in a sentence it is stated that a heuristic algorithm was developed. Although the title and the text mentions efficient algorithm, the algorithm, which is claimed only in the last section of the paper to be heuristic, is not discussed.	equations. This is done conventionally, using MATLAB routines. It is used for comparison purpose. On page 14, at the end of the “Concluding Remarks” section has been modified.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		