

Review Form 3

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_127478
Title of the Manuscript:	Prediction Of Air Quality Index Based On Support Vector Machine And Improved Butterfly Optimization Algorithm
Type of the Article	Research

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript is valuable to the scientific community as it tackles air quality prediction with an innovative IBOA-SVM model. Its rigorous experiments and comparisons highlight the model's robustness and superiority over traditional methods. The research contributes to machine learning and environmental science, offering a practical tool to address air pollution challenges.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	Yes, but need to add % of accuracy and efficiency improvement with existing methods	
Are subsections and structure of the manuscript appropriate?	Yes	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript is scientifically robust and technically sound due to its novel integration of support vector machines (SVM) with an improved butterfly optimization algorithm (IBOA). The use of a dynamic sigmoid-based parameter adjustment enhances convergence and accuracy, validated through benchmark tests. Comprehensive experiments demonstrate the model's superior performance in predicting air quality compared to other established methods.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =	References must be updated and it seems that authors need to refer to latest work to justify the current approach	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	<ul style="list-style-type: none">• Verify the MSE value of Hangzhou city % of deviation is less compared to other cities• Need to add the future scope• Please remove words indicating personification like "our, this paper", etc. Such words are not to be used in scientific literature.• Use the word like Researchers instead of scholars	
<u>Optional/General</u> comments	Some equations should be improved (avoid unnecessary commas) some of the references are outdated and should be omitted.	

PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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