

**Review Form 3**

Journal Name:	<b>Asian Journal of Probability and Statistics</b>
Manuscript Number:	<b>Ms_AJPAS_121639</b>
Title of the Manuscript:	<b>Motor Insurance Claim Frequency Prediction Using XGBoost</b>
Type of the Article	<b>Original Research Article</b>

**Review Form 3**

**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	Reviewer's comment	<b>Author's Feedback</b> <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 paper presents an interesting and relevant study on the use of the XGBoost algorithm for predicting motor insurance claim frequency. The research is well-timed, considering the growing interest in leveraging machine learning techniques for risk assessment in the insurance sector. The paper, however, requires several improvements in terms of clarity, methodology explanation, and discussion of results to reach its full potential.	
Is the title of the article suitable? (If not please suggest an alternative title)	Title is appropriate	
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.	The abstract should be revised to more clearly highlight the problem statement, the methodology employed, and the key findings. It currently lacks sufficient detail and does not fully convey the significance of the study.	
Are subsections and structure of the manuscript appropriate?	<p><b>Literature Review:</b> The literature review is somewhat limited and could be expanded to include more recent studies on machine learning applications in the insurance sector. A comparison with similar studies that have used different algorithms or approaches would strengthen the justification for using XGBoost.</p> <p><b>Data Description:</b> The paper provides limited information about the dataset used. A more detailed description, including the source of the data, the period covered, and the specific features included, would enhance the transparency of the study.</p> <p><b>Model Tuning:</b> While the paper mentions the use of hyperparameter tuning, the process is not described in detail. It would be beneficial to include a more thorough explanation of how the optimal hyperparameters were selected, possibly including a discussion of cross-validation results.</p>	
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.	<p><b>Relevance and Contribution:</b> The application of XGBoost in motor insurance claim prediction is novel and highly relevant. The study addresses a significant issue in the insurance industry, and the choice of algorithm is appropriate given its performance in handling tabular data with complex interactions.</p> <p><b>Methodology:</b> The paper demonstrates a solid understanding of the XGBoost algorithm and its application to the problem at hand. The selection of features and the description of the preprocessing steps are appropriate and necessary for the context of the study.</p> <p><b>Results:</b> The results are promising, showing that XGBoost outperforms traditional methods in terms of prediction accuracy. The use of appropriate evaluation metrics such as Mean Absolute Error (MAE) and Root Mean Square Error (RMSE) adds credibility to the findings.</p>	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :	More references should be added	

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Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?	Yes	
Optional/General comments	<p><b>Discussion and Implications:</b> The discussion section should be expanded to include a more in-depth interpretation of the results. The implications of the findings for the insurance industry, as well as potential limitations of the study, should be clearly articulated.</p> <p><b>Conclusion:</b> The conclusion section is brief and needs to be strengthened. It should reiterate the key findings, discuss their significance, and suggest potential avenues for future research.</p> <p><b>Figures and Tables:</b> Some figures and tables are not referenced in the text. Ensure that all figures and tables are clearly explained and integrated into the narrative of the paper.</p> <p><b>Technical Writing:</b> There are instances where the technical language used could be simplified for better readability. Additionally, some sections of the paper contain grammatical errors and awkward phrasing that should be corrected.</p> <p><b>Recommendation:</b> With revisions to address the points mentioned above, this paper has the potential to make a valuable contribution to the field of insurance analytics. I recommend major revisions, after which the paper can be reconsidered for publication.</p>	

### PART 2:

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

### Reviewer Details:

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