Review Form 3

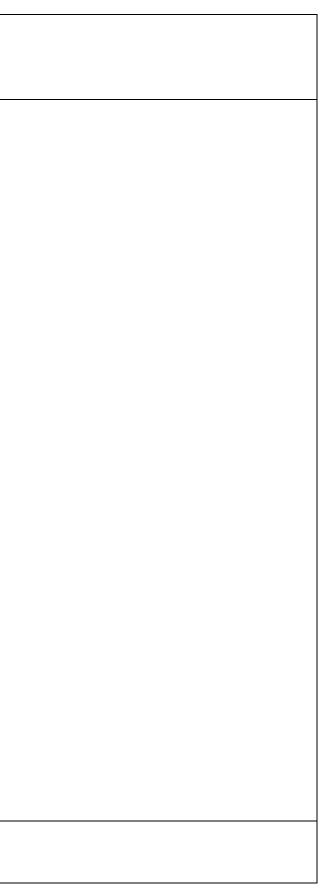|	
Journal Name:	**Asian Journal of Probability and Statistics**
Manuscript Number:	**Ms_AJPAS_129937**
Title of the Manuscript:	
	Uncovering Risk Factors for Heart Disease and Predicting Outcomes Using Machine Learning Approaches
Type of the Article	**Original Research Article**

<mark>PART 1:</mark> Comments

	Reviewer's comment	Author's Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	**This research have well explained with respect to statistical analysis, however this study is due to the following reasons:** 　**As such there is no novelty in this research; this research is similar to other studies related to heart-disease diagnosis using ML models** **-- This study might have added novelty if the survey questionnaire (questions related to subjective answers and apply qualitative methods) predict the heart disease by combining quantitative results with qualitative analysis.** **-- In addition, many studies have applied ensembling techniques to predict the health diagnosis and shown the exceptional contributions in this domain.** **-- Visual representations are not provided to show the research outputs and contributions.**	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**Not suitable,** **No special contribution on uncovering the heart-disease factors** **Suggested title: Predicting the heart disease using machine learning techniques**	

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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.	**No suggestion, since this study do not have any significance on predicting the heart disease and identifying the best ML technique**	

Is the manuscript scientifically, correct? Please write here.	The following suggestions are to be addressed:
	
	Literature Evidences are not provided with respect to
	    i) predict factors associated with heart-related diseases -- evidences to be provided for choosing the factors
	    ii) age group split up based on which study?
	
	    iii) methods selection such as SVM, DT, RF, KNN etc.
	
	Data collection:
	
	With respect to data collection through questionnaire has to be effective if the researchers collected the data from the health-care providers (direct method with the ethical approval of concerned cohort group of patients)
	
	following queries needs to be addressed in this research
	
	i) how patients do remember their medical history -- this may lead to errors in the provided information
	
	ii) one of the main challenges in questionnaire is that participant may not answer all the questions with full enthuasitic manner
	
	iii) as face to face collection of survey method was applied in this research - in general patients preferrably to fill the form rather than face to face.
	
	iv) this research did not provide details related to the follow-up of data collection with patients;
	
	In section 2.3 statistical analysis:
	mentioned that "outcomes are categorical, [yes/no] -- so this study opted for supervised ML models as opposed to regression" -- Authors have to retract the statement - all the regression models are not opposed to binary classification[yes/no]; since logistic or probit regression techniques can be applied to binary classification.
	
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	3.3 relationship between risk factors and heart disease:
	
	The claim mentioned in this section ie.) gender, current smoking ...are not statistically significant -- which might not be true for Gender since the dataset is gender biased of male participants.
	===	

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Year 2024 references can be included	

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Is the language/English quality of the article suitable for scholarly communications?	Yes	
Optional/General 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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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