

Review of: "Quantile regression for identifying latent structures in COVID-19 pandemic – Examples from Nepal"

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Potential competing interests: No potential competing interests to declare.

Dear authors, your article titled "Quantile regression for identifying latent structures in COVID-19 pandemic – Examples from Nepal" I have carefully read. The topic of the presented work is very important and important progress has been made in the last few years regarding pandemics and disease outbreaks. In my opinion, the article should be considered. Consider the suggestions I mentioned below (major revision):

1- Why did you use quantitative regression to identify Covid-19?

2- Lack of Detailed Methodological Description: The abstract lacks specific details regarding the data sources, feature selection process, and the precise methodology employed for modeling. Additional information on the training and validation of the models would enhance the transparency and replicability of the study.

3- Explainability is another issue that these methods cannot explain. To improve analysis and engagement, you can add an explanatory analysis such as GIS in your paper. For example, you can refer to some recent works that have used GIS:

<https://doi.org/10.1007/s40808-023-01729-y>

<https://doi.org/10.1007/s41324-022-00488-9>

<https://doi.org/10.1007/s41324-023-00522-4>

4- The study significance and novelty of this manuscript should be described well in the abstract and introduction. Otherwise, how to identify the significance of your study?

5- The accuracy of the input variables is not well described. Input variables with low resolution and/or low precision cannot be used well in the Covid-19 pandemic.

6- Please summarize some numerical results related to the performance of different quantile regressions.

7- In the data part, it is not clear what data the authors have used and it should be presented in the table and the methods used should be explained and finally the research flowchart should be given.

8- The comparative studies are not enough, you use few factors and few Quantile regression, as a result, we do not

determine the importance of technical parameters.

9- I also suggest including in the discussion or conclusion section some comments concerning the limitations of the developed approach and future work.