

Authors propose an interesting approach to analyse the impact of COVID-19 lockdown on Air Quality. While the basic idea is technically sound and enjoys good novelty, a few concerns are raised, and details are as follows:

Please give detail introduction about the research motivation, which is less comprehensive. It would be great to see:

- 1) why the research problem studied is important, especially what could be key impacts in real world applications and theoretical exploration?
- 2) what are the main characteristics (con/pro) for existing approaches?
- 3) Authors need to discuss the comparative with Deep Learning models. Why they are stick with the conventional approaches.
- 4) The use of SVM, decision tree and random forest in case of regression problem is questionable. The problem belongs to regression problem and the comparative methods are the solution who perform well in classification problems.
- 5) Why is LSTM selected as base classifier in the proposed model?
- 6) There could have been some inferential statistical analysis to be performed on the parameters of Air quality index. This will also explore the latent relation exist amongst the attributes.
- 7) The performance of the proposed approach is better when compared to the conventional model but what about the state-of-the-art model prediction comparison.
- 8) Why not the other environmental factors are not considered for the analysis of Air quality such as Traffic, weather, location etc.
- 9) what is the measure taken to handle outliers since the event like lockdown will not be a frequent event, it will happen very rarely so measuring the air quality across the year and also for the lockdown situation there must be appropriate measures to be taken.

The work is also close to the aims and scope of the journal and so, I think it can be accepted for publication in its revised version. Prior to publication it is important to further improve the use of English language in the manuscript.