

Dear Editor:

Thank you very much for giving us the opportunity to improve our manuscript. Upon the insightful and constructive comments given by the reviewer, we have made revision to our manuscript. We have presented our point-to-point responses to the comments given by the reviewer.

L55

>>Their RNN model adopts word embedding techniques, including TF-IDF and n-gram, to capture broad context of the words in social media text for better classification (Amin et al., 2020). Jelodar et al. used automated extraction of the novel coronavirus-related posts from social media and topic modeling to uncover various issues related to COVID-19 from public opinions, and then investigated how to use LSTM recurrent neural network for sentiment classification of COVID-19 comments (Jelodar et al., 2020). <<

I appreciate the effort of adding some reference to recent developments in Text Classification but please, there is no need to pick references related to coronavirus. There is plenty of reference available for Text Classification within Disaster Risk Management.

Response: Thank you for your important suggestion. We revise this part as below: Wadawadagi et al. investigated the severity of disaster events from micro-blog messages during natural calamities and emergencies using convolutional neural networks (CNN) and recurrent neural networks (RNN). Their work employed a joint model to combine the features of CNN with RNN, taking account of the coarse-grained local features generated via CNN and long-range dependencies learned through RNN for analysis of small text messages (Wadawadagi et al., 2020). Also, Singh et al. investigated the problem of localization using the social sensing model (Twitter) to provide an efficient, reliable and accurate flood text classification model with minimal labeled data. They proposed to perform text classification using the inductive transfer learning method for effective classification of flood-related feeds in new locations (Singh et al., 2020).

L475

>>We have completed the development of the urban waterlogging monitoring system based on the WeChat applet, a very popular social media software similar to WhatsApp in Europe and American. We would like to release the applet as a plugin of WeChat, so that user can launch this application from WeChat by one click. With the help of WeChat's powerful web service capability and wide application, it is helpful for people to monitor the flood deposits, especially for taxis and bus drivers.<<

I'd suggest to remove the above text from the conclusions as the app is not a contribution to research (and if it is it should be explained how). Authors already wrote about the app in a specific paragraph.

Response: Thank you for your constructive suggestion. We have removed the above text from the conclusions.

These revisions, following the suggestions of the reviewer, have significantly improved the quality of our manuscript, and made our method more clearly to users. Once again, we sincerely thank the reviewers for the constructive comments, and thank you for considering our paper as a candidate for publication in *Natural Hazards and Earth System Sciences*.

Sincerely yours,

Hui Liu, Ya Hao, Wenhao Zhang, Hanyue Zhang, Fei Gao, Jinping Tong\*