Response

Thank you for your review and suggestions. I will answer your questions and suggestions sincerely.

Point 1: The authors have never spelled out "Conv-LSTM" and this should be amended and explanations provided.

Response 1: In fact, this should have been given in the abstract for the full title, but I forgot to proofread the abstract at the end, and this is from a NIPS article from 2015, and I cite it in reference [21] if you're interested. In the meantime, I've given the detailed formula in Section 4.2.

Point 2: In line 91, Related works should not be "recommended" but "reviewed". In line 110, it should be made clearer any shortcomings of the traditional methods that have driven the development of the particular method proposed in the paper. "machine learning" should not be considered as a traditional method though as presented in line 101.

Response 2: We tweaked some of the expressions and added some clear weaknesses and shortcomings of the traditional approach. In particular, "machine learning" in our article aims to express some traditional methods in machine learning, such as logistic regression, support vector machine, etc. Deep learning is a part of machine learning actually. I modified it to "machine learning" to "Traditional machine learning methods".

Point 3: A number of abbreviations were used in this paper, such as LSTM, ...etc. The authors should make sure that the full spelling of the abbreviations involved should be mentioned in their first occurrences in the paper.

Point 4: In line 119 and other similar occurrences, the authors should avoid using the name of abbreviated terms as the subject, e.g., "FCL-Net [5] proposed ...", instead the authors should amend the same statement in the following manner: "It was proposed in [5] that the FCL-Net was used to fuse ..."

Point 5: The authors should check carefully that an article should be included for singular term, e.g., in line 144, "Graph structure..." should be "A graph structure..." All other similar occurrences in this manner should be checked and amended.

Response 3,4,5: There are indeed many unclear or wrong expressions in our article. Thank you for your correction. We have checked and modified the whole article. Since Point 3,4, and 5 are all descriptive questions in the article, I give the response for them in this answer.

Point 6: In line 153, it's not sure about the meaning of the sentence. The authors may wish to state in a more meaningful way.

Response 6: Compared with some region-level forecasting, such as traffic flow, speed, etc., they mainly study the traffic under N nodes. OD forecast often needs to study the order demand of N ×N. It means that the dimension increases to two-dimensional. Therefore, our expression is not clear enough and prone to ambiguity. For this reason we have deleted the relevant expression.

Point 7: "slightly overused ..." what does that mean?

Response 7: Because we have used "X" to represent OD features in the previous article, and "X" and "Y" are also commonly used to represent inputs and outputs. So this sentence is meant to avoid misunderstanding of the two "X".

Point 8: In line 183, the authors should explain why as per what'e mentioned, "as much work does"?

Response 8: We adjusted the relevant statements. The original meaning is that many time series forecasting work uses LSTM,RNN, etc.

Point 9: Equation (2) contains a number of symbols and mathematical operations that requires the authors to present clearer explanation on how they represent the process involved in Conv-LSTM. The same comment is also given to equations (3) and (4).

Response 9: Our description of equation 2 is too little, and indeed lacks a description of the role of key gating and timing learning. We added part of the explanation and calculation steps.

For Equation 3,4, I think it has been adequately described, we introduce the motivation and explanation for using this method to learn graph structure. Maybe some readers have questions about where E_o comes from, this is a learnable parameter.

Point 10: In line 197, "We use two chapters to ..." Not sure which two chapters the authors were intending to refer to?

Response 10: We've deleted that statement. This expression is gilding the lily.

Point 11: In line 230, please explain why the authors thought the change is "creative"?

Response 11: Assuming we follow the previous method, because of the symmetry property of the graph, this means that we think the adjacency relation from origin perspective and from destination perspective is the same. However, it ignores the fact that the adjacency relationship between them changes. We assume an extreme case, where the orders from Region A to all regions are the same, but only the orders from Region A exist in region B. Obviously, we cannot assume that the same graph is used to represent their adjacency relationship. That's why we designed it

this way. I think most work use one graph in a graph convolution process, some multiple graphs correspond to multiple graphs convolution. So our idea is creative.

Point 12: In line 242, the same dataset has been used in many other research and their associated published papers. The authors should provide more information on the dataset and the referenced sources. Moreover, the authors should also mentioned whether any similar works have been produced and whether any comparable results can be discussed in this paper.

Response 12: We added a reference to indicate the source of our data set. Correspondingly, due to the difficulty of OD prediction, OD level predictions were few, and the models we mainly compared were also from CSTN (reference [11]).

Point 13: In line 246, "between 0 and 030" should be "between 00:00 and 00:30)"

Point 14: In Tables 1 and 2, "CTBGCN (ours)" actually meant "Conv-LSTM". As a general rule of thumb, it's always better to use a third person's tense to write in the paper. Avoid too many "We" or "ours", as they may reduce the objectiveness of the discussions in the paper.

Point 15: The authors presented the results of the goodness of fitting the data, but it doesn't seem the predicability of their proposed models, which seems to be the main theme of the paper.

Response 13,14,15: We reduced a lot of the subjective descriptions and make a revise of time for Points 13, 14. We analyzed a random prediction of a piece of data with Figure 5 and 6. and we added some forecasting metrics for regions with high demand to reflect the stability and accuracy of our model. You can get some details in Table 3 and Section 5.5.

Point 16: As indicated in line 323, the improvements were only slightly. The authors should comment what other benefits they observe with their proposed model. This is important, as otherwise, this paper simply reported an academic exercise to try a different method.

Response 16: The experimental metrics in this part are based all the ablation experiments we conducted instead of other baseline. We incorrectly placed the title of the table. That's actually how we designed the experiment and improved the metrics step by step. In fact, the metric of the O_RMSE has a obvious improvement and other metrics has also improved.

Point 17: The conclusion is too brief and lacking substance, with many questions unanswered, and some of the claims made by the authors were not made noticeable with supports of results. For example, lines 293 to 303, the authors should be more specific with results found to substantiate their associated claims of the superbness of their proposed model.

Response 17: We have added a part of the conclusion, which focuses on the concrete advantages, limitations and future directions of the model. At the same time, combined with your Point 15,

some analysis of specific forecast results may make the whole result more fully presented. We have improved the content of the abstract so that it can better connect to the conclusion.

Please contact me if you have any questions. Thank you again.