

For research article

Response to Reviewer 1 Comments

1. Summary

Thank you very much for taking the time to review this manuscript. Please find the detailed responses below and the corresponding revisions/corrections highlighted/in track changes in the re-submitted files.

2. Questions for General Evaluation

Reviewer's Evaluation

Response and Revisions

Does the introduction provide sufficient background and include all relevant references?

Yes/Can be improved/**Must be improved**/Not applicable

I will give my corresponding response in the point-by-point response letter. The same as below

Are all the cited references relevant to the research?

Yes/Can be improved/**Must be improved**/Not applicable

Is the research design appropriate?

Yes/**Can be improved**/Must be improved/Not applicable

Are the methods adequately described?

Yes/**Can be improved**/Must be improved/Not applicable

Are the results clearly presented?

Yes/Can be improved/**Must be improved**/Not applicable

Are the conclusions supported by the results?

Yes/Can be improved/**Must be improved**/Not applicable

3. Point-by-point response to Comments and Suggestions for Authors

Comments 1: *The abstract of this paper should be re-written. Authors should mention dataset they used. They need to emphasize the novelty. The most important quantitative findings should be emphasized.*

Response 1: Thank you for pointing this out. We agree with this comment. Therefore, we have revised lines 16-19 of the abstract of this paper. We have identified the dataset used in the experiment and highlighted quantitative findings on the dataset MSMT17, which is larger and closer to real-world scenarios.

The modifications are as follows:

Experimental results show that our method achieves significant improvements on Market-1501, DukeMTMC-reID and MSMT17. Especially on the MSMT17 dataset that is close to real-world scenarios, MFFNet improves 1.3% and 1.8% on Rank-1 and mAP, respectively.

Comments 2: *Lines 23-26: No need to provide that many references since you are not mentioning details of them.*

Response 2: Agree. We have removed references to this section. The original intention was to

echo other models used in the comparative experiments in the experimental section.

Comments 3: *There are too many references in the introduction section and most of them are only listed. Please only use the necessary references and provide more explanation on them.*

Response 3: Agree. We have made revisions, and some of the references in the original manuscript are annotations for some deep learning models in the experiment section.

Comments 4: *Lines 28-31: very short sentences*

Response 4: Agree. We have modified the short sentences in lines 30-32. When examining the manuscript, we did not notice the inappropriate use of the statement here.

The modifications are as follows:

These methods can extract advanced abstract features, and effectively improve the accuracy of model recognition. According to the methods of extracting features of pedestrian images, they can be divided into two categories: Global feature learning methods and Local feature learning methods.

Comments 5: *You need to use some references for the Section 3.*

Response 5: Because section 3 is the model design part of this paper, there are relatively few references. We have added necessary references as needed.

Comments 6: *You should include IoU score, precision, recall and F1 values for your experiments.*

Response 6: In pedestrian re-identification, mAP and Rank-1 are the most mainstream performance evaluation metrics. mAP comprehensively considers the accuracy and recall of pedestrian re-identification algorithms and provides a more comprehensive evaluation criterion. Rank-1 represents the performance under ideal conditions, which is more intuitive and crucial in practical application scenarios. At the same time, using these two evaluation metrics facilitates comparative experiments with previous mainstream models.

Comments 7: *There should be a concrete discussion section in which you should comprehensively analyze your results with respect to similar studies in the literature. Please mention about drawbacks of your method in terms of visual and statistical results.*

Response 7: Thank you for pointing this out. We agree with this comment. Therefore, we have added a discussion on the shortcomings of our model in the conclusion section, and they have been marked in red in the manuscript.

Comments 8: *The conclusion section is very weak. It is not delivering and scientific message and future insights.*

Response 8: Thank you for pointing this out. We agree with this comment. Therefore, we have modified the conclusion in lines 349-354 of the paper and added an outlook for future work, whereas scientific information is described in the experimental section.

The modification is as follows:

Since we only consider the impact of typical complex scenes such as scale changes, illumination differences, and occlusion on pedestrian re-identification in this paper. Therefore, in future work, we plan to optimize the model to adapt to other complex scenarios without excessively

expanding the model. In addition to this, employing different training strategies, such as unsupervised or self-supervised learning methods, to enhance the applicability of the model in real-world scenarios, is also a focus of our future work.

4. Response to Comments on the Quality of English Language

Point 1: *The conclusion section is very weak. It is not delivering and scientific message and future insights.*

Response 1: Thank you for pointing this out. We agree with this comment. Therefore, we have modified the conclusion in lines 349-354 of the paper and added an outlook for future work. And the conclusion mainly explains the innovations of the paper and the performance improvements achieved, so the scientific information is placed in the experimental section. (Other language issues have been revised in the manuscript and marked in red)