Review

Detecting Manual Alterations in Biological Image Data Using Contrastive Learning and Pairwise Image Comparison

Nekhoroshkov G.

1. Suggest increasing the font size of the axis tick labels on the AUC-ROC plots.

2. Add references when mentioning figures in the text to facilitate easier navigation.

3. Make the GitHub link clickable.

4. Consider adding a section on future work and limitations; this would simplify any subsequent explorations.

5. There is no discussion section, as indicated in the outline. I suggest adding one, since the conclusions about the method and the chosen fixed hyperparameters in Section 5 are currently unclear.

6. Half of the bibliography is not cited in the article. I recommend incorporating more of these references into the related work section to give readers deeper insight and clearer connections.

7. For clarity — and because the code is already available on GitHub — keep only the theoretical algorithm descriptions in the main text.

8. Not all cited articles include links to their arXiv pages or to the code. Please add these links in the bibliography for easier reference.

Overall opinion. The problem statement and the motivation for this exploration are presented clearly. The author has surveyed numerous prior works and discussed their relevance thoughtfully. The theoretical section is easy to follow, and the descriptions of the base algorithms helped me understand both the core idea and the experimental setup. The results are displayed graphically, providing a strong sense of their effectiveness and potential applications. Once the minor fixes above are implemented, this paper could represent a significant advance in machine-learning–based medical detection technologies!

Reviewer:
Nikitin A.