Reviewer’s report

Title: Computer-assisted Lip Diagnosis on Traditional Chinese Medicine Using Multi-class Support Vector Machines

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Reviewer: Xuezhong Zhou

Reviewer’s report:

This paper proposes a machine learning based lip color classification method for TCM diagnosis. The method includes several steps: image segmentation, SVM-based feature selection and classification model training and testing/prediction. Based on the feature selection results with 9 important features, the method using Multi-class SVM classification model can get the highest performance. This machine learning and image based lip color recognition approach proposes a promising method to help the objective diagnosis in TCM because TCM physicians are easy to get different diagnosis results due to different situations and individual experiences. Although the related image processing and machine learning methods are well recognized in computer science field, this paper gives an interesting solution for TCM clinical observation applications. Therefore, this method is valuable to be further used for machine related TCM clinical observations.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.