Review of: "EEG-based Emotion Classification using Deep Learning: Approaches, Trends and Bibliometrics"

Syed A.R. Abu-Bakar[1]

1 Universiti Teknologi Malaysia

Potential competing interests: No potential competing interests to declare.

A very interesting article indeed. With rich information provided and excellent writing style, this article is very easy to read and comprehend, apart from being very useful. To increase the impact of this paper in terms of its academic contribution, I would like to make several suggestions as follows:

1. Table 1 needs to be more concise and informative. Information on types or classes of emotions being studied or analyzed, and the number of samples used for training and testing needs to be included. This is to make the table and the comparison meaningful.

2. Additionally, to emphasize its relevancy, Table 1 needs to be cited in the text describing a summary of these existing methods. Particularly, references 18 to 36 are not mentioned in the text at all.

3. The second paragraph in Section 2, which starts with "Traditional machine learning …", is out of place and unfit to be in this section. As the title of the section is on deep learning, possibly this paragraph can be inserted prior to this section so that section two is more focused on deep learning techniques only.

4. In section 3.2, in which the search strategy is described, the authors excluded the word "emotions" or "emotion recognition" as one of the keywords used for the search. I believe this word is one of the important subject matters in this article and therefore should be included in the search strategy.

5. In section 3.3 (Results), it is not clear how to relate between Figure 2 (Top Cited Authors) and Figure 3 (Most Relevant (Productive) Authors in the Field). None of the names listed in Figure 2 appear in Figure 3. Some comments or insights from the authors would be appreciated.

6. To make the map shown in Figure 4 more illustrative and distinguishable, I would suggest that different colors, rather than different shades of blue, be used.

7. The result on publications illustrated in Figure 6 shows that SENSORS and IEEE ACCESS both contributed to 43 articles, not 15 as mentioned in the text (see Section 3.3, paragraph 5).

8. Figure 8 contains a solid line and a dashed line but without a legend. Please provide a legend similar to those found in Figure 5 and Figure 7.

9. The discussion section (section 4) seems somewhat diluted and shallow. It would be great if the authors could also provide the projection and trend on future research undertakings in this particular field.

10. As mentioned in the conclusion, as well as in Figure 2, Arbeu JP is the topmost cited author. However, ironically, none of his papers appears in the list of references. Since his name has been mentioned, it would be a justice served by including his work in the list of references.