

Review of: "A New Index for Measuring the Difference Between Two Probability Distributions"

G. S. David Sam Jayakumar¹

¹ Jamal Mohamed College

Potential competing interests: No potential competing interests to declare.

I went through the entire manuscript with the title “A New Index for Measuring the Difference Between Two Probability Distributions.” The idea of the authors is to propose a new distribution discrepancy index which may lie between 0 and 1. Closer to 0, the discrepancy between the distributions will be less, and vice versa. After careful observation, I need to list the lacunae in the manuscript.

1. At first, what is the novelty of the manuscript? Give justification.
2. The authors frequently used the word “infirmity”; change it to Information. For example, information theory, information measure, etc.
3. Already many divergence metrics exist in the literature, such as the famous Kullback-Leibler, Jensen’s divergence based on the Radon-Nikodym derivative, along with different types of entropy measures. The question is whether the proposed new DDI outperforms the existing divergence measures.
4. Hellinger distance, Bhattacharyya distance also lie between 0 and 1. What makes DDI superior to the existing measures?

I am able to point dozens of lacunae. As a statistician, I suggest the authors incorporate the pointed suggestions very carefully and don’t resubmit the manuscript.

I recommend the editor to **reject the manuscript in its current form.**