

Peer Review

Review of: "Fixed-Sized Clusters k-Means"

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This paper focuses on a clustering algorithm to handle cluster size constraints. Currently, it lacks the professionalism and comprehensiveness of a mature research paper, more like a beginner's work, and urgently needs improvement.

Comments

1. On page 5, line 1, the phrase “where n_l :s are cluster sizes” is unclear and should be rephrased for better understanding.
2. Research background and related studies are insufficiently covered, making it hard for readers to grasp the novelty, as the existing literature isn't well-explored.
3. Algorithm 1 is too simply described. Just saying “solve an assignment problem” without elaboration makes it difficult to understand.
4. There's no introduction to the Hungarian algorithm, which is crucial for understanding the key steps.
5. The experimental design is weak, with only one experiment and no control groups, limiting the validity and generalizability of the results.
6. The formula expressions in the paper, especially when considering formulas 3, 4, 5, and 6 together, are not easily understandable. It is recommended that in future revisions, some illustrations be added. For example, using diagrams to represent the cumulative sum and cluster updates would likely yield better results. References could be made to Fig 2 and Fig 3 in “Divide-and-conquer based large-scale spectral clustering” by Hongmin Li, Xiucai Ye, Akira Imakura,

Tetsuya Sakurai, in Neurocomputing, Volume 501, 2022, Pages 664 – 678, ISSN 0925 – 2312,
<https://doi.org/10.1016/j.neucom.2022.06.006>.

Declarations

Potential competing interests: No potential competing interests to declare.