

REVIEWER'S REPORT

Manuscript No.: JNCS -085

Title: BIOINFORMATICS ALGORITHMS FOR GENOMIC DATA ANALYSIS

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality				
Techn. Quality				
Clarity				
Significance				

Reviewer Id: JPR-208

Reviewer's Comment for Publication.

The manuscript provides a well-structured and informative review of bioinformatics algorithms used in genomic data analysis, covering fundamental approaches such as dynamic programming, heuristic sequence alignment, indexing-based methods, graph-based genome assembly, variant detection, and comparative genomics. The discussion effectively connects these computational methods with important applications in medical genomics, evolutionary biology, agriculture, microbial genomics, and population genetics, while appropriately addressing challenges related to computational complexity, sequencing errors, repetitive genomic regions, memory requirements, reference bias, benchmarking, and reproducibility. The inclusion of emerging areas such as long-read sequencing, pangenome graphs, parallel and distributed computing, cloud-based genomic analysis, and machine-learning-assisted methods strengthens the relevance of the review. However, the review methodology should be improved by clearly documenting the literature search strategy, databases, publication period, and inclusion/exclusion criteria, and a more detailed quantitative comparison of major algorithms in terms of accuracy, runtime, memory requirements, and scalability would enhance the technical depth. Overall, the manuscript is relevant and technically informative and can be considered for publication after minor revision.

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