



Chapter

Comparative Performance Analysis of Machine Learning and Hardware Techniques for DNA Sequence Alignment

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ABSTRACT

The advent of new sequencing technologies paves the way for DNA Sequence Alignment, which is broadly used in the field of computational biology and Bioinformatics to determine the comparison between biological arrangements. The main function of DNA is information storage. A large volume of DNA sequences is being generated, and we need to provide adequately fast sequence analysis tools that are required to cope with the high rate of generation of DNA sequence data. A wide variety of alignment algorithms and software have been subsequently developed. Many computational methods have been developed for DNA sequence alignment. Besides hardware-based techniques, more powerful machine learning technique is widely used in DNA sequencing data, and lots of research is going on using machine learning tools. In this paper, we review