Real-Time Data Analytics with Machine Learning Using an Artificial Intelligence-Based Approach

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Abstract : Search-based data analytics is a big area that requires great attention in many different areas. To address real-time issues, many methods and algorithms are utilised for search-based optimization. Many fields of study include design, accounting, finance, continuous imaging, and many more, but the most important are machine learning and deep learning. The experts are experimenting with a wide range of technologies and advancements, including open source, and have developed methods that enable them to achieve a greater degree of precision. When it comes to deep learning, it's inextricably linked to machine learning since it combines greater levels of execution and accuracy with a lower base error rate. Genetic Method, a high-performance algorithm for engineering optimization, is presented in the paper as use cases. For the purposes of data analytics and in particular for a multiprocessor scheduling strategy, the goal of this article is to provide the effective implementation of the famous evolutionary computing technique of genetic algorithm for genetic algorithms. Due to its better results on a variety of factors, the genetic algorithm described here may offer real and measurable results. There were no successful outcomes from the prior techniques' usage of greedy-based approaches, therefore researchers turned to genetic algorithm-based optimization. To design and simulate the implementation scenarios, we used MATLAB and Java-based development tools, and the results were very useful for optimizing.

Keywords: Genetic Algorithm, Engineering Optimization, Search Based Optimization

INTRODUCTION

Machine learning and deep learning-based applications are increasingly occupying and subordinating the area of information disclosure and prescient research. Machine learning provides rational applications and solutions to real problems with enormous computations and methods [1]. Machine learning methods are widely coordinated for critical thinking and predictive mining in three ways. Regulated learning, unsupervised learning, and fortified learning are all included in this methodology. In accordance with the specific execution space and precision needed these methods are used [2].