A Review of Nature Inspired Algorithms and Its Applications

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Abstract

If we look closely at nature, we can see that, although it appears to be very plain and systematic on the surface, it conceals many complexities underneath it. Since technology follows the same 'simple-yet-complex' theory as nature, researchers have often attempted to apply what they have learned from nature to complex technological Algorithms that are used to solve a few real-world human problems. There has been a rapid rise in research in this area over the last decade. Nature-inspired algorithms are now used in almost every field of science. While it has been extended to a variety of fields, the scope of this paper is limited to its use in the optimization and computer Intelligence. The main goal of optimization and Computer intelligence applications is to obtain, handle, and use the massive amount of data stored in distributed databases, which can be structured, semi-structured, or unstructured. This is a developing field that is moving toward more intelligent and human-centric applications. This paper provides an overview of important nature-inspired techniques for optimising various aspects of Semantic Web applications, including knowledge bases, content filtering, information retrieval, and inference mechanisms.

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