



Current studies and applications of Krill Herd and Gravitational Search Algorithms in healthcare

Rebwar Khalid Hamad¹ · Tarik A. Rashid²

Accepted: 8 July 2023
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Abstract

Nature-Inspired Computing or NIC for short is a relatively young field that tries to discover fresh methods of computing by researching how natural phenomena function to find solutions to complicated issues in many contexts. As a consequence of this, ground-breaking research has been conducted in a variety of domains, including synthetic immune functions, neural networks, intelligence of swarm, as well as computing of evolutionary. In the domains of biology, physics, engineering, economics, and management, NIC techniques are used. In real-world classification, optimization, forecasting, and clustering, as well as engineering and science issues, meta-heuristics algorithms are successful, efficient, and resilient. There are two active NIC patterns: the gravitational search algorithm and the Krill herd algorithm. The study on using the Krill Herd Algorithm (KH) and the Gravitational Search Algorithm (GSA) in medicine and healthcare is given a worldwide and historical review in this publication. Comprehensive surveys have been conducted on some other nature-inspired algorithms, including KH and GSA. The various versions of the KH and GSA algorithms and their applications in healthcare are thoroughly reviewed in the present article. Nonetheless, no survey research on KH and GSA in the healthcare field has been undertaken. As a result, this work conducts a thorough review of KH and GSA to assist researchers in using them in diverse domains or hybridizing them with other popular algorithms. It also provides an in-depth examination of the KH and GSA in terms of application, modification, and hybridization. It is important to note that the goal of the study is to offer a viewpoint on GSA with KH, particularly for academics interested in investigating the capabilities and performance of the algorithm in the healthcare and medical domains.

Keywords Healthcare · Meta-heuristic · Nature inspired computing · Krill Herd algorithm · Gravitational Search Algorithm

✉ Rebwar Khalid Hamad
rebwar.khalid@epu.edu.iq

¹ Department of Information Systems Engineering, Erbil Technical Engineering College, Erbil Polytechnic University, Erbil, Iraq

² Computer Science and Engineering Department, University of Kurdistan Hewler, Erbil, Iraq