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J-BHI Special Issue on “Swarm and Evolutionary Computing Driven Immuno- informatics for Biomedicine and Healthcare”

The impact of pollution and environmental degradation calls us to take immediate action to enhance healthcare applications. Numerous technological innovations are being widely implemented to empower healthcare applications considerably. Swarm and Evolutionary Computation (SEC) is one of the emerging fields of modern computer sciences that deals with a nature-influenced system for optimizing real-world healthcare applications. Evolutionary computation is not just about problem-solving but also about developing technological trends that can make our lives better.

Nurturing intellectual techniques and technologies in the medical sector to enhance human health means acquiring sustainable healthy future generations. Research encountered that both swarm and evolutionary computation utilize the metaphor of natural healthcare mechanisms like reproduction, mutation, and selection to fetch higher living standards amidst people. Various evolutionary algorithms like genetic algorithms, genetic programming, evolution methodologies, and evolutionary programming induce to attain pre-defined fitness quality, which aids in managing healthy life. In addition, evolutionary computations derived Immunoinformatic is expected to develop vaccines for many chronic diseases. Medical research scopes are usually vast and complex, easily accomplished using swarm and evolutionary computation algorithms, and revolutionized medical industries appreciably. Evolutionary computation is often implicated in issues of organizing and scheduling medical treatments to enhance the service to the next level in a short period. Indeed, computerized tomography and magnetoencephalography are widely deployed with evolutionary computation algorithms to bring out greater accuracy, scalability, and accessibility in medicinal therapies. A piece of adequate knowledge in the utilization of swarm and evolutionary computation derived immunoinformatic in developing health services enhances the medical methodologies and strategies. Furthermore, SEC is found to play a vital role in ML (Machine Learning) and DL (Deep Learning) techniques to design the algorithms invariably.

Topics of interest include, but are not limited to, the following:

- Insights of a swarm and evolutionary computation for healthy generations
- Future perspectives of evolutionary computation in enhancing the medical sector
- Innovative technological trends for developing healthcare applications
- Limitations and challenges in implementing computation technologies for health units
- Evolutionary computation for healthcare: objectives and applications
- Revolutionary techniques and strategies in transforming healthcare sectors
- Role of immunoinformatic to enrich the healthy lifestyle for the future generations
- Critical evolutionary computation technologies for the sustainable medical industries
- Swarm and evolutionary computation for healthcare: pros and cons
- Intellectual approaches in evolutionary computational algorithms for human health

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