



RESEARCH ARTICLE

New Applications of Soft Computing, Artificial Intelligence, Fuzzy Logic & Genetic Algorithm in Bioinformatics

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Abstract— Soft computing is make several latent in bioinformatics, especially by generating low-cost, low precision (approximate), good solutions. Bioinformatics is an interdisciplinary research area that is the edge between the biological and computational sciences. Bioinformatics pact with algorithms, databases and information systems, web technologies, artificial intelligence and soft computing, information and computation theory, structural biology, software engineering, data mining, image processing, modeling and simulation, discrete mathematics, control and system theory, circuit theory, and statistics.

Bioinformatics is a promise and pioneering research field. Soft Computing is live a crucial role as it give techniques that are particularly well suited to obtain results in an efficient way and with a good level of quality. Soft Computing can also be useful to model the indistinctness and uncertainty that the Bioinformatics data and problems have. In this paper, we survey the role of different soft computing paradigms, like Fuzzy Sets (FSs), Artificial Neural Networks (ANNs), evolutionary computation, Rough Sets (RSs), and Support Vector Machines (SVMs), biologically inspired algorithm like ant colony system, swarm intelligence and others in bioinformatics systems and problems.

Key Terms: - Bioinformatics; Soft computing; artificial neural network; Fuzzy logic; Genetic algorithms

Full Text: <http://www.ijcsmc.com/docs/papers/May2013/V2I5201388.pdf>