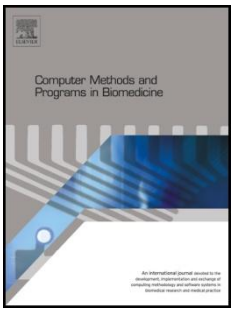

Title: A survey of nature-inspired algorithms for feature selection to identify parkinson's disease

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Highlights

- We perform a comparative analysis of nature inspired-algorithms for feature selection to aid the classification of affected Parkinson's patients from the rest.
- Feature selection was applied to datasets of Gait & Speech of Parkinson's Patients.
- Binary Bat Algorithm outperformed traditional techniques like Particle Swarm Optimization (PSO), Genetic Algorithm and Modified Cuckoo Search Algorithm.

A Survey of Nature-Inspired Algorithms for Feature Selection to Identify Parkinson's Disease

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***Abstract*—Background and Objectives: Parkinson's disease is a chronic neurological disorder that directly affects human gait. It leads to slowness of movement, causes muscle rigidity and tremors. Analyzing human gait serves to be useful in studies aiming at early recognition of the disease. In this paper we perform a comparative analysis of various nature inspired algorithms to select optimal features/variables required for aiding in the classification of affected patients from the rest.**

Methods: For the experiments, we use a real life dataset of 166 people containing both healthy controls and affected people. Following the optimal feature selection process, the dataset is then classified using a neural network.