

MRI BRAIN IMAGE ANALYSIS FOR TUMOR DETECTION USING OPTIMIZATION TECHNIQUE

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ABSTRACT

Brain tumor is a group of abnormal cells that grows inside of the brain or around the brain. Tumors can directly destroy all healthy brain cells or indirectly damage healthy cells by crowding other parts of the brain and causing inflammation, brain swelling and pressure within the skull. Ant Colony Optimization (ACO) metaheuristic is a recent population-based approach inspired by the behavior of real ants colony and based upon their collective foraging behavior. In ACO, solutions of the problem are constructed within a stochastic iterative process, by adding solution components to partial solutions. Each individual ant constructs a part of the solution using an artificial pheromone, which reflects its experience accumulated while solving the problem, and heuristic information dependent on the problem. In this paper, the proposed technique ACO hybrid with Fuzzy algorithm and Technique are tested from KMCH Hospital Database.

KEYWORDS: Ant Colony Optimization, Fuzzy Algorithm, Metaheuristic, Artificial Pheromone