

Summary

Out of the 4 algorithms , PSO is the most commonly used for NN weight optimization because it is a population based optimization algorithm that has been specifically designed for continuous optimization problems.

GA is a good optimization algo but they are slow for large scale problems .

Cultural algorithm is a hybrid of genetic algorithm with cultural evolution component but it is computationally expensive and requires careful parameter tuning.

Ant colony may struggle with high-dimensional problems and requires careful parameter tuning.

Therefore, PSO and genetic are better to use for the given dataset.

Research papers referred to :

1. Neural Network optimization using genetic algorithm: A hierarchical fuzzy method

By SK Sharma and MO Tokhi.

2. Designing Artificial Neural Networks using particle swarm optimization

Algorithms by Beatriz and Roberto .

3. Training NN with ant colony optimization – Arun Pandian