**Objective**

The goal of this assignment is to use the random optimization search algorithms to find the weights for the neural network instead of backprop. The assignment is focused on the understanding of the algorithm or technique, and the algorithms’ implementation are given as in Java package ABIGAIL. Here are the four random optimization search algorithms:

1. Randomized hill climbing
2. Simulated annealing
3. A genetic algorithm
4. MIMIC

**Neural Network**