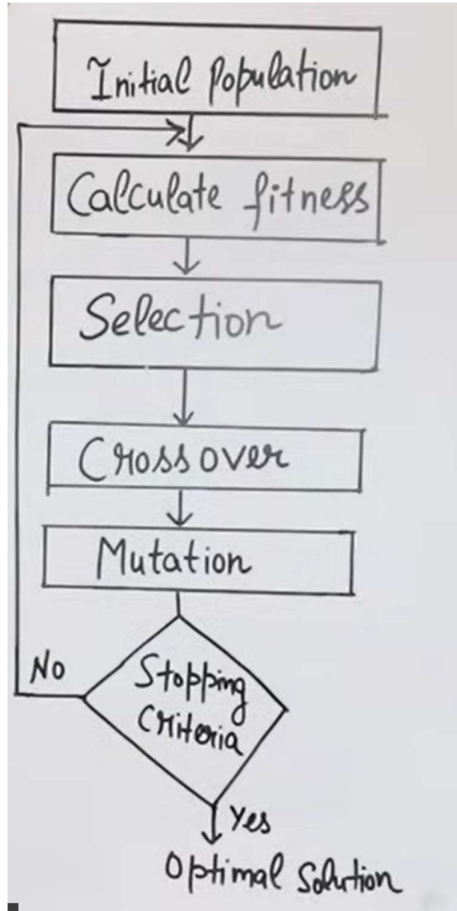


Genetic Algorithm



Genetic algorithms are inspired by the process of natural selection. They are used to find optimal or near-optimal solutions to a problem by mimicking the way biological evolution works.

Initialization: Start with a population of possible solutions.

Selection: Evaluate these solutions and select the best ones based on how well they solve the problem.

Crossover: Combine parts of the best solutions to create new solutions (like mixing genes).

Mutation: Make random changes to some solutions to introduce diversity.

Iteration: Repeat the process over several generations, gradually improving the solutions.