**1. Search Algorithms**

* **A\* Algorithm**: Used for pathfinding and graph traversal.
* **Breadth-First Search (BFS)**: Used for searching a tree or graph.
* **Depth-First Search (DFS)**: Another fundamental graph search algorithm.
* **Dijkstra’s Algorithm**: Finds the shortest path between nodes in a graph.
* **Iterative Deepening A\***: Combines BFS and DFS for search problems.

**2. Optimization Algorithms**

* **Gradient Descent**: Used for optimizing machine learning models.
* **Simulated Annealing**: A probabilistic technique for approximating the global optimum.
* **Genetic Algorithm**: A heuristic search based on the concept of natural selection.
* **Particle Swarm Optimization (PSO)**: Used in optimization problems inspired by bird flocking.

Minimax Algorithm: Used in decision-making and game theory.

Alpha-Beta Pruning: An optimization for the Minimax algorithm.