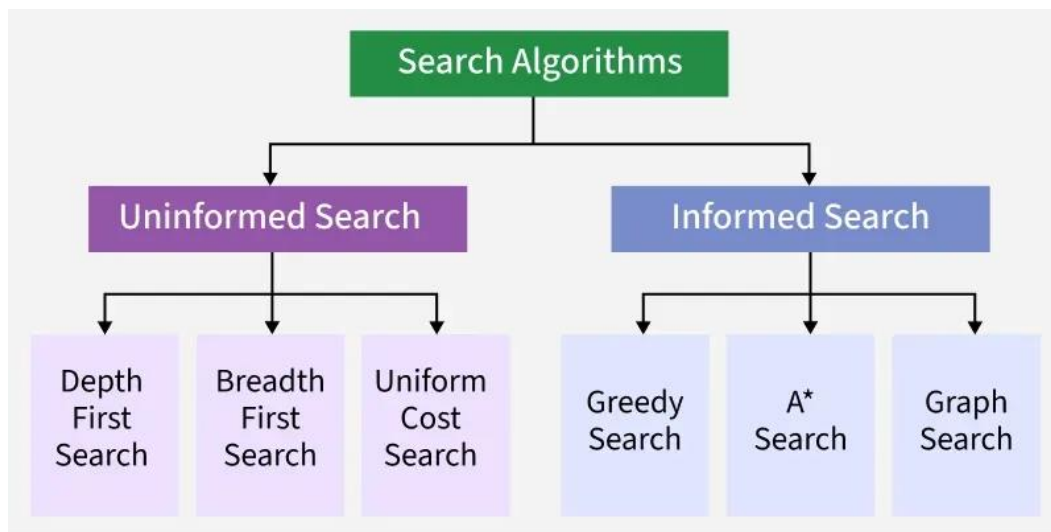# Search Algorithms in AI

- Search algorithms in AI help find solutions by exploring possible paths or options in a problem space. AI uses them in tasks like pathfinding, decision making and game playing. These algorithms work by searching through a set of possibilities to reach a goal, either blindly without extra information or with guidance using heuristics.

Types of search algorithms

Uninformed Search Algorithms in AI

- **Uninformed search algorithms is also known as blind search algorithms**, are a class of search algorithms that do not use any domain-specific knowledge about the problem being solved.
  - Uninformed search algorithms rely on the information provided in the problem definition, such as the initial state, actions available in each state, and the goal state.
  - These are called "blind" because they do not have a heuristic function to guide the search towards the goal instead, they explore the search space systematically.
  - Uninformed search algorithms provide basic search strategies for exploring problem spaces where no additional knowledge is available beyond the problem definition.
  - These algorithms are important for solving a wide range of problems in AI, such as pathfinding, puzzle solving, and state-space search.

Informed Search Algorithms in Artificial Intelligence

Informed search algorithms in AI are search methods that use extra knowledge, called heuristics, to prioritize which paths to explore. By estimating how close each possible step is to the goal, these algorithms can find solutions more quickly and efficiently than uninformed or "blind," search. They are widely used in AI for tasks like pathfinding and puzzle solving because they help navigate large, complex search spaces.