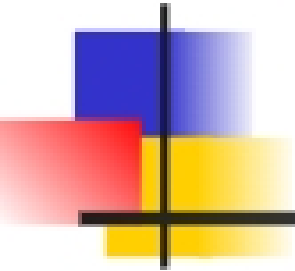


Informed search algorithms



Chapter 4



Outline

- Best-first search
- Greedy best-first search
- A* search
- Heuristics
- Local search algorithms
- Hill-climbing search
- Simulated annealing search
- Local beam search
- Genetic algorithms



Best-first search

- Idea: use an **evaluation function** $f(n)$ for each node
 - $f(n)$ provides an estimate for the total cost.
 - ➔ Expand the node n with smallest $f(n)$.
- Implementation:
Order the nodes in fringe in increasing order of cost.
- Special cases:
 - greedy best-first search
 - A* search