

AI algorithms: Heuristic Search

hill climbing 1

hill climbing 2

greedy search

Input:

A graph of nodes, a start node S and a goal node G

A queue Q of possible paths

A heuristic function H of the distance to G

Output:

A path from S to G

Algorithm:

$Q \leftarrow S$

while Q not empty AND G not reached **do**

$p \leftarrow$ get (and remove) first path from Q

$P \leftarrow$ all paths to children of p

 Remove all paths from P containing loops

 Sort P according to H

 Add best of all paths of P to front of Q

 Sort Q according to H

end while

if G reached **then**

 Success

else

 Failure

end if