

A* algorithm (U, V, C, D)

1. Let U be source and V be destination.
2. Start traversing from the U.
3. Let $C = h(n)$ and $D = g(n)$.
4. Let $U_i = (U_1, U_2, \dots, U_n)$ where U_1 to U_n are intermediate nodes between U and V.
5. If $U \Rightarrow V$ is directly connected
 - $f(n) = h(n) + g(n)$
where $g(n)$ is backtracking distanceelse $U \Rightarrow V$ is not directly connected
 - $f(n) = h(n) + g(n)$
where $g(n)$ is distance which is summation of distance from destination to source node.
6. Total A* cost $f(i) = \sum_{n=1}^i f(n)$ summation from U to V.