

The hill climbing algorithm chooses a random point then looks at its neighbors. Then it identifies which neighbor brings it closer to its goal and goes to it. It repeats this process until it reaches a point where no neighbor will bring it closer to its goal. At this point the algorithm terminates

Pros:

The algorithm is very simple and easy to understand. It is also very quick and doesn't use much space.

Cons:

This algorithm is unlikely to find the global maxima. Since at each local maxima, there are no neighbors which will bring it closer to its goal it will probably return a local maxima