

Simulated annealing

current \leftarrow initial state

$T \leftarrow$ a large positive value

while $T > 0$ do

 next \leftarrow a random neighbour of current

$\Delta E \leftarrow$ current.cost - next.cost

 if $\Delta E \leq 0$ then

 current \leftarrow next

 else

 current \leftarrow next with probability $p = e^{-\frac{\Delta E}{T}}$

 endif

 decrease T

end while

return current

=

Algorithm

current \leftarrow random initial state

current.cost \leftarrow cost(current)

$T \leftarrow$ a large value

while $T > 0$ and current.cost > 0

 neighbour \leftarrow ~~random~~ generated neighbour of current state

 neighbour.cost = cost(neighbour)

 cost.diff = current.cost - neighbour.cost

 if cost.diff > 0 :

 current = neighbour

 current.cost \leftarrow neighbour.cost

$T = T - 1$

end while

return current.state, current.cost



hwtw