

Wednesday, Apr 5, 2023

Lecture #31

MSSX 6000

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Announcements

* Normal Office Hours today, 2:30-3:30 (Teams)

* Fri, Apr. 7 - no class

Mon, Apr. 10 - no lecture (home work day)
no OH

* HW 5 = assigned 4/12, due 4/24

* HW 6 = assigned 4/24, due 5/5

Topic 12 - Simulated Annealing (continued)

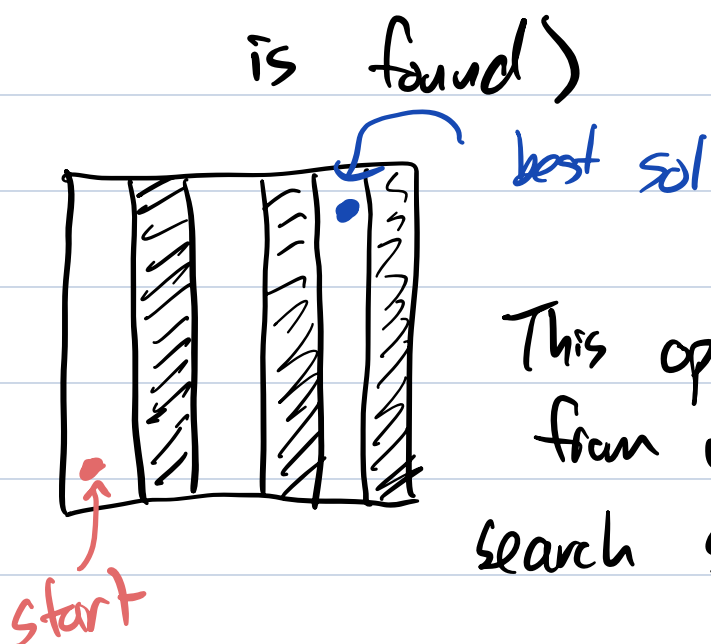
→ Springs Demo

→ Knapsack Demo

Scoring when constraints are violated:

* Don't allow constraints to be violated
(retweaking until a valid solution)

(2)



This option could block us from visiting the whole search space.

- * if a tweak violates constraints, go there sometimes, and don't score, but tweak further
- * if a solution violates constraints, make its score automatically 0 (if maximizing)
- * bad solutions receive a penalty based on how bad they are

knapsack:

$$\text{value} \rightarrow \text{value} \cdot \left(1 - \mu \cdot \frac{\text{excess weight}}{\text{capacity}} \right)$$

parameter you choose