Fri, Apr. 12, 2024

Announcements:

→ HW 5 due Monday, April 22
2 questions using Hill-Climbing

How long should we run at a fixed temp. before changing temp. (according to cooling schedule)

Lots of possibilities:

* N tweak attempts in total (ex: N=1000 N=10000)

* K worsening tweaks rejected
or
L worsening tweaks accepted,
whichever comes first
(Ex: K=1000 or L=1000)

How long do we cool the system before stopping?

* Set a time limit
* Keep track of what % of worsening solutions you're accepting, halt after N rounds where it was 0%.
* Pre-set end temperature

$$T_f = \frac{T_0}{10{,}000}$$

↑ final temp

Goal: by the time you end, you're basically H-C, accepting only better solutions

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WIS coding demo

tweak? solution = any subset of meetings

$$all\_meetings = \{M_1, M_2, M_3, M_4, M_5, M_6, M_7, M_8, M_9, M_{10}\}$$

$$sol = \{M_3, M_6, M_7\}$$

Bad: pick 1 of the 3 randomly, delete it, pick 1 of the 7 not in "sol", randomly, add it

Ex: $\{M_3, M_6, M_7\} \rightarrow \{M_3, M_9, M_7\}$

One possibility:

	M_1	M_2	M_3	M_4	M_5	M_6	M_7	M_8	M_9	M_{10}
sol =	F	F	T	F	F	T	T	F	F	F

pick 1 of 10 spots at random and toggle

T → F or F → T