

Sample questions to test your understanding of AI presentations before September 8, 2006

Classifying grades (Kevin Green)

Why did he put grades in CLUSTERS in alternating order?

Improving on a psychological model of human reaction to being hit (Mike Grenier)

What is an example of an improvement on the model distributed in class, and why is it an improvement?

Signed digraph models (Devin Pohly)

Give an example where positive feedback is good. [Ans.: job openings & housing starts]

Give an example where positive feedback is bad.

Give an example to show that merely multiplying the signs along an arc from A to B to C of a signed digraph does not correctly explain the (indirect) effect of A on C.

Excel goal seeking (Dan Edwards)

Explain the following results when the goal of making $\exp(-x^2)$ be 1 is requested:

	A	B	C	D	E	F	G
1							
2	0.027311	0.999254					
3							
4							
5							
6							
7							
8							
9							
10							

Goal Seek Status

Goal Seeking with Cell B2
found a solution.

Target value: 1
Current value: 0.999254387

OK
Cancel
Step
Pause

Left hand rule for leaving a maze (Joe Prendergast)

What's one assumption that is required to leave a maze with that rule other than that there is an exit?

Sudoku (Val Curd)

[Refer to demo in class today of Sudoku puzzle solution in Python]

Tic-tac-toe (Ethan Melious)

A bad heuristic looks one move ahead: are there 2 in a row to block? What's a better heuristic?

Data Mining (Dr. William Pottenger)

What does it mean that a model is "over-fitted"?

The relationship between magnesium and migraines was not found in medical articles by "associative rule mining"; it was found using "higher order associative rule mining." Explain.

Give an example of a decision tree.

A mathematical tool for data mining called the "support vector machine" model (it's actually not a machine at all but an algorithm) "discovered" that Moses wrote the New Testament book of Hebrews. How do you suppose it came to that conclusion?

Defining AI (Dr. Chase)

Based on your readings, the presentations in class, and what you've learned before, how is AI's knowledge representation (KR) different from, say, a database's?

Is Turing's test a test of Strong AI or Weak AI?

Can both connectionist and symbolic AI be examples of Strong AI? [From text reading, although I will cover it in class today.]

Use the following phrases correctly in a sentence: goal-seeking, simulated annealing, hill climbing, heuristic function, classification, solving by constraints, backward goal-seeking.