CS343
Artificial Intelligence

Prof: Peter Stone

Department of Computer Science
The University of Texas at Austin

Good Morning, Colleagues

Department of Computer Sciences
The University of Texas at Austin

Good Morning, Colleagues

Are there any questions?

Logistics

- Search assignment past due

Logistics

- Search assignment past due

- Multiagent assignment assigned

Peter Stone

Logistics

- Search assignment past due

- Multiagent assignment assigned

- Final exam scheduling

Logistics

- Search assignment past due

- Multiagent assignment assigned

- Final exam scheduling

- Next week's readings: MDPs (week 1 activity)

Logistics

- Search assignment past due

- Multiagent assignment assigned

- Final exam scheduling

- Next week's readings: MDPs (week 1 activity)

- FAI

Pending Questions

- "Eventually admissible?"

Pending Questions

- "Eventually admissible?"

- How prune chance nodes?
- Transposition table? (keys/vals)
- Forward pruning - how avoid removing best options?
- Exercise 5.6 - continuous-space
- Evaluation function with no prior experience

Pending Questions

- "Eventually admissible?"

- How prune chance nodes?
- Transposition table? (keys/vals)
- Forward pruning - how avoid removing best options?
- Exercise 5.6 - continuous-space
- Evaluation function with no prior experience

- How does AI deal with irrational utility
- Could you quantify regret?
- Optimizer's curse
- Why substitutability needed for rationality? (how fooled?)

Bid for a Car

- You asked your mechanic to go check it out

- The number on your piece of paper is what he told you it's worth

- Mechanic is unbiased (equal chance of overestimating and underestimating)

Bid for a Car

- You asked your mechanic to go check it out

- The number on your piece of paper is what he told you it's worth

- Mechanic is unbiased (equal chance of overestimating and underestimating)

- Let's run an auction

Bid for a Car

- You asked your mechanic to go check it out

- The number on your piece of paper is what he told you it's worth

- Mechanic is unbiased (equal chance of overestimating and underestimating)

- Let's run an auction

- Bidding starts at $1000

- $10 increments allowed

Bid for a Car

- You asked your mechanic to go check it out

- The number on your piece of paper is what he told you it's worth

- Mechanic is unbiased (equal chance of overestimating and underestimating)

- Let's run an auction

- Bidding starts at $1000

- $10 increments allowed

- If you win the car, your utility is the car's true worth minus the amount you bid

- If you don't win the car, your utility is -$10

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

- The mechanics were unbiased estimators

- For each of you with a value $x too high, someone else got a value $x too low

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

- The mechanics were unbiased estimators

- For each of you with a value $x too high, someone else got a value $x too low

- Numbers were $1100, $1125, $1150 . . . $1900

- True value:

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

- The mechanics were unbiased estimators

- For each of you with a value $x too high, someone else got a value $x too low

- Numbers were $1100, $1125, $1150 . . . $1900

- True value: $1500

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

- The mechanics were unbiased estimators

- For each of you with a value x too high, someone else got a value x too low

- Numbers were $1100, $1125, $1150 . . . $1900

- True value: $1500

- Utility of the winner?

How did you do?

- Most of you ended with utility of -$10

- How about the winner of the auction?

- The mechanics were unbiased estimators

- For each of you with a value $x too high, someone else got a value $x too low

- Numbers were $1100, $1125, $1150 . . . $1900

- True value: $1500

- Utility of the winner?

Winner's curse!

UTCS *Department of Computer Sciences*
The University of Texas at Austin