# CS343 Artificial Intelligence

**Prof: Peter Stone** 

Department of Computer Science The University of Texas at Austin

# Good Afternoon, Colleagues



# Good Afternoon, Colleagues

Are there any questions?

# Logistics

• We're US open champions!

## Logistics

- We're US open champions!
- Tournament has 2 agents
- Classification assignment under way

## Logistics

- We're US open champions!
- Tournament has 2 agents
- Classification assignment under way
- Martial Hebert talk on Friday
- Two very good ones next week

• What's the difference?

- What's the difference?
- Formulate chess as RL vs. chess as SL

- What's the difference?
- Formulate chess as RL vs. chess as SL
- Make a dataset to predict whether income is greater than \$50k from census data

- What's the difference?
- Formulate chess as RL vs. chess as SL
- Make a dataset to predict whether income is greater than \$50k from census data
  - The "adult" data set from UCI repository

- What's the difference?
- Formulate chess as RL vs. chess as SL
- Make a dataset to predict whether income is greater than \$50k from census data
  - The "adult" data set from UCI repository
- Make a dataset to predict whether a car is a "good" purchase based on customer feedback (say for Consumer Reports)

- What's the difference?
- Formulate chess as RL vs. chess as SL
- Make a dataset to predict whether income is greater than \$50k from census data
  - The "adult" data set from UCI repository
- Make a dataset to predict whether a car is a "good" purchase based on customer feedback (say for Consumer Reports)
  - A data set from the decision tree applet

#### **Neural Networks**

 Exercise 18.19: Construct a NN by hand that computes the XOR of two inputs. Be sure to specify what types of units you're using.

#### **Neural Networks**

- Exercise 18.19: Construct a NN by hand that computes the XOR of two inputs. Be sure to specify what types of units you're using.
  - Start by making perceptrons for OR and AND

$x_0$	$x_1$	OR	AND	XOR
0	0	0	0	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	0