

# **CS344M**

# **Autonomous Multiagent Systems**

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# Good Afternoon, Colleagues

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Are there any questions?

# Logistics

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- Next week's readings up

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- Progress reports due in 1 week

# T-tests

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- Who's better at video games in general?



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- Can you run multiple times until you get a significant result?

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- When use a chi-squared test?
- Discrete data classes (no such thing as a mean)
- Is the number of wins/ties/losses different vs. UvA than in self play?



# Examples from your projects

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- Paired t-test?
- Chi-squared test?

# Mixed strategy equilibrium

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		Action 1	Action 2
Player 1	Action 1	3,7	2,2
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 $q = 1/4$
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 $p = 2/7$

# Correlated Equilibria

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Sometimes mixing isn't enough: Bach/Stravinsky

		Wife	
		S	B
Me	S	2, 1	0, 0
	B	0, 0	1, 2

Want only S,S or B,B - 50% each

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- When and where?
- What are the Nash equilibria?
- Where would you meet in Austin? New York City?

# Incomplete Information Games

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- We each get one of 3 cards: 1,2,3
- If we both fold, we both lose nothing
- If one raises and one folds, the raiser gets 1
- If both raise, the one with the higher card gets 5
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With more numbers and/or different payoffs, bluffing can be a part of the Nash Equilibrium

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- What if one player isn't rational?
- What can't game theory simulate?