

# **CS344M**

# **Autonomous Multiagent Systems**

**Prof: Peter Stone**

Department of Computer Science  
The University of Texas at Austin

# Good Afternoon, Colleagues

---

Are there any questions?

# Logistics

---

- Surveys due Wednesday at 9pm (12 as of this morning)

# Logistics

---

- Surveys due Wednesday at 9pm (12 as of this morning)
- Next week's readings posted

# Logistics

---

- Surveys due Wednesday at 9pm (12 as of this morning)
- Next week's readings posted
- AAMAS

# Logistics

---

- Surveys due Wednesday at 9pm (12 as of this morning)
- Next week's readings posted
- AAMAS
  - “It is hard to get help for things that don't have much documentation. I understand that is how research works but typically deadlines for research are more than 15 weeks.”

# Proposals

---

- Overall, very good!

# Proposals

---

- Overall, very good!
- A few common problems:



# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .
  - . . . or too much how without identifying the challenges

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .
  - . . . or too much how without identifying the challenges
  - Too much proposed

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .
  - . . . or too much how without identifying the challenges
  - Too much proposed
  - Not enough to convince me that it will work

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .
  - . . . or too much how without identifying the challenges
  - Too much proposed
  - Not enough to convince me that it will work
  - No evaluation plan

# Proposals

---

- Overall, very good!
- A few common problems:
  - No clear intro / problem statement
  - Lots of “what” but very little “how” . . .
  - . . . or too much how without identifying the challenges
  - Too much proposed
  - Not enough to convince me that it will work
  - No evaluation plan
- Comments both from me and a TA

# Progress reports

---

- Gather resources early



# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports
  - May reflect side forrays



# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports
  - May reflect side forrays
  - Be more realistic

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports
  - May reflect side forrays
  - Be more realistic
  - Be much more specific

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports
  - May reflect side forrays
  - Be more realistic
  - Be much more specific
  - Have **something** implemented and evaluated

# Progress reports

---

- Gather resources early
  - See UT Austin Villa keepaway page for java trainer code
  - Soft arithmetic code in week 5 resources
  - AIJ '99 paper, Optimal scoring paper
  - Ask!
- Consider making your own opponents for testing
- Consider changing simulator parameters for testing
- Will be stricter on progress reports
  - May reflect side forrays
  - Be more realistic
  - Be much more specific
  - Have **something** implemented and evaluated
  - Return proposals with it

# Kiva Systems

---

- Video (and RoboCup connection)

# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?

# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?
- How are collisions avoided with A\*?

# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?
- How are collisions avoided with A\*?
- If Drive Unit does path planning, how does the JM know how to allocate resources?



# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?
- How are collisions avoided with A\*?
- If Drive Unit does path planning, how does the JM know how to allocate resources?
- How do they determine the ratio of pods to drive units to human pickers?

# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?
- How are collisions avoided with A\*?
- If Drive Unit does path planning, how does the JM know how to allocate resources?
- How do they determine the ratio of pods to drive units to human pickers?
- What are the “over 100 message types”?

# Kiva Systems

---

- Video (and RoboCup connection)
- Is Job Manager (JM) a single point of failure?
- How are collisions avoided with A\*?
- If Drive Unit does path planning, how does the JM know how to allocate resources?
- How do they determine the ratio of pods to drive units to human pickers?
- What are the “over 100 message types”?
- Could you outperform the warehouse system with a swarm?