

**CS394R**  
**Reinforcement Learning:**  
**Theory and Practice**

**Scott Niekum and Peter Stone**

Department of Computer Science  
The University of Texas at Austin

# Good Morning Colleagues

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- Are there any questions?

# Logistics

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- Registering for the course

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- Nice responses!

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  - Also ask in class or on discussion board

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- If you missed last Thursday . . .

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- Do the first exercises and programming assignment
- If you missed last Thursday ...
  - Watch intro lecture video
  - Read webpage carefully

# Our Role

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  - provide context
  - guide your learning (assign readings, exercises, activities)
  - clarify misconceptions
- You have to do the learning
- Read, write, ask, answer, program (investigate)

# Logistics

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- Week numberings

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- Email both instructors and TAs



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- Next readings posted

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  - Dynamic programming and Monte Carlo

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  - Dynamic programming and Monte Carlo
  - Mostly chapter 4 Tuesday, then chapter 5

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  - **2nd edition!!**
  - Dynamic programming and Monte Carlo
  - Mostly chapter 4 Tuesday, then chapter 5
- Look at resources page

# Let's Play!

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- The answer:

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- I'm a 2-armed bandit
- As a class, you choose which arm
- Maximize your payoff.
- The answer:

```
(defun l () (+ 5 (random 7)))
```

```
(defun r ()
```

```
  (let ((x (random 3)))
```

```
    (case x
```

```
      (0 20)
```

```
      (1 0)
```

```
      (2 (+ 7 (random 11))))
```

```
    )))
```

- What about minimizing risk?

# N-armed bandit in practice?

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- Choosing mechanics
- Choosing a barber/hairdresser

# Assignments

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- Read Chapters 4 and 5



# Assignments

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- Monitor and contribute to discussion forums!
- 1st exercises and programming assignment
- Read Chapters 4 and 5
- Submit a reading response by 5pm Monday