CS394R
Reinforcement Learning: Theory and Practice

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Good Morning Colleagues
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- Are there any questions?
Logistics
Logistics

- Registering for the course (roster)
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- Nice responses!
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  – Length and content mostly good
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    - Help me help you
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  - First due Thursday
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  - I have author’s responses to exercises (1st edition)
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    - First due Thursday
  - I have author’s responses to exercises (1st edition)
- If you missed last Thursday . . .
My Role
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  - provide context
  - guide your learning (assign readings, activities)
  - clarify misconceptions
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• You have to do the learning
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  - provide context
  - guide your learning (assign readings, activities)
  - clarify misconceptions
- You have to do the learning
- Read, write, present, ask, answer, program (investigate)
Logistics
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- Programming assignment due Thursday
- Next readings posted
Logistics

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- Next readings posted
  - 2nd edition!!
Logistics

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- Next readings posted
  - 2nd edition!!
  - MDPs and Dynamic programming
Logistics

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- Next readings posted
  - 2nd edition!!
  - MDPs and Dynamic programming
  - Mostly chapter 3 Tuesday, then chapter 4
Logistics

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  - Discussion leaders
Logistics

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  - MDPs and Dynamic programming
  - Mostly chapter 3 Tuesday, then chapter 4
  - Discussion leaders
- Look at resources page
Let’s Play!
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- I’m a 2-armed bandit
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- I’m a 2-armed bandit
- As a class, you choose which arm: 3 times around.
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- Maximize your payoff.
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- As a class, you choose which arm: 3 times around.
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- The answer:
Let’s Play!

- I’m a 2-armed bandit
- As a class, you choose which arm: 3 times around.
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- The answer:

```lisp
(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?
N-armed bandit in practice?

- Choosing mechanics
- Choosing a barber/hairdresser
Student-led Discussion

- Aishwarya Padmakumar on non-stationarity
Assignments

• Join piazza!
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• 1st programming assignment due Thursday

• Read Chapters 3 and 4
Assignments

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• 1st programming assignment due Thursday
• Read Chapters 3 and 4
• Send a reading response by 5pm Monday
Assignments

- Join piazza!
- 1st programming assignment due Thursday
- Read Chapters 3 and 4
- Send a reading response by 5pm Monday
- Need a discussion leader volunteer