Good Afternoon, Colleagues

Are there any questions?
Class Discussion

David Li on team modeling
Where do Models Come From

Observation:

- Tambe and RMM: use existing model
  - No building a model
Where do Models Come From

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What if we can’t build a full model in advance?
Where do Models Come From

Observation:

- Tambe and RMM: use existing model
  - No building a model

What if we can’t build a full model in advance?

- What are some incremental approaches for building a predictive model?
Play me at RoShamBo

- Rock beats scissors
- Scissors beats paper
- Paper beats rock
Play me at RoShamBo

- Rock beats scissors
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- What is your strategy before modeling me?
Play me at RoShamBo

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- What is your strategy before modeling me?
- What is your strategy after modeling me?
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- What is your strategy before modeling me?
- What is your strategy after modeling me?
- Am I modeling you?
Play me at RoShamBo

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- What is your strategy before modeling me?
- What is your strategy after modeling me?
- Am I modeling you?
- Would your end strategy change if I can?
Reinforcement Learning

- Slides from Tom Mitchell’s ML book
Discussion

- How useful is the concept of Nash equilibrium?
Discussion

• How useful is the concept of Nash equilibrium?

• Shoham:
  – 0-sum = single agent problem
  – common payoff = search for pareto optimum
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  – General sum is the interesting case:
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  – Learning in an environment with other, unknown, independent agents who may also be learning
Discussion

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• Shoham:
  – 0-sum = single agent problem
  – common payoff = search for pareto optimum
  – General sum is the interesting case:
    – Learning in an environment with other, unknown, independent agents who may also be learning
    – Need to do well against some set of agents, never too poorly, and well against yourself.