

Artificial Intelligence Programming
Utility and Decision Making

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22-2: Making decisions

- At this point, we know how to describe the probability of events occurring.
 - Or states being reached, in agent terms.
- Knowing the probabilities of events is only part of the battle.
- Agents are really interested in maximizing performance.
- Often, performance can be captured by *utility*.
- Utility indicates the relative value of a state.

22-3: Types of decision-making problems

- Single-agent, deterministic, full information, episodic
 - We've done this with the reflex agent
- Single-agent, deterministic, full information, sequential
 - We can use search here.
- Single-agent, stochastic, partial information, episodic
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- multiple-agent, deterministic, full information, episodic