

Artificial Intelligence 2

Quiz #05 (Utility theory)

How do we formally describe which action a rational agent should select?

What is a lottery?

What is the relation between preferences and utility? Can we calculate utility from preferences? Is such a utility function unique?

Describe the properties of rational preferences.

What is the relation between monetary value and utility?

Describe and explain Allais and Ellsberg paradoxes.

Describe framing and anchoring effects.

Explain the notion of dominance for multi-attribute utilities (for both deterministic and stochastic cases).

How can we calculate the value of information? How is this value used during rational decisions? Is value of information additive? Give some example.

When is it important to obtain new information?