Decision making under uncertainty represents the heart of decision theory. Decision making under uncertainty Influence diagrams provide a natural framework for modeling the relations between variables and decisions. They also provide principled methods for finding an optimal decision policy that maximizes the expected utility. Making decisions in conditions of uncertainty involves judgment, values, and balance in appraising the different options available (including the option of deciding not to act).

Decision making under uncertainty in child protection ... and values. Deciding How to Decide - Harvard Business Review provides a decision-making guide for practitioners to apply Bayesian decision analysis in practical assessment problems. Following the review of Probability theory and practice, the research describes a real method for decision making under uncertainty ...

Tonic dopamine, uncertainty and basal ganglia action ... which increases under conditions of uncertainty, decision making was mediated by the effects of tonic dopamine on the precision of the model action selection mechanism.

Decision making under uncertainty: models and choices ... the challenges of decision making under uncertainty from a computational perspective. It presents both the theory behind decision making models and algorithms for simulation in example applications that range from speech recognition to aircraft collision avoidance. Focusing on an easy method for designing decision agents, planning and reinforcement learning, instead of formal models, introducing Natural models as a practical method.

Decision making under uncertainty: models and choices ... provides a brief overview of decision theory and presents a practical method for modeling decisions under uncertainty and selecting decision alternatives that optimize the decision maker's objectives. This decision-modeling methodology introduced in this paper is available for free here and data for decision environments.

Decision Making Under Uncertainty: A Neural Model Based on ... recent advances in three different fields: (1) neural models of Bayesian inference, (2) the theory of partially observable Markov decision processes (POMDPs), and (3) algorithms for temporal difference (TD) learning in reinforcement learning theory.

Decision Making Under Uncertainty: Theory and Application provides an introduction to the challenges of decision making under uncertainty from a computational perspective. It presents both the theory behind decision making models and algorithms for simulation in example applications that range from speech recognition to aircraft collision avoidance. Focusing on an easy method for designing decision agents, planning and reinforcement learning, instead of formal models, introducing Natural models as a practical method.

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