Multi-stage Influence Diagrams Decision Using Genetic Algorithms*

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ABSTRACT

We present an approach to the solution of large multi-stage decision problems under uncertainty represented as influence diagrams. This approach differs from the existing IDs evaluating approaches in the way that it exploits all possible solutions simultaneously using Genetic algorithms. It's an approximate algorithm and is easily paralleled. Particularly, we introduce Game Theory to solve some complex realistic decision problems in multi-agent environment.

Keywords: influence diagrams, genetic algorithm, bayesian network, game theory, Nash equilibrium.

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