

Value Iteration versus Policy Iteration on Markov and Semi Markov Decision problem

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The most interesting problem in the treatment of dynamic probabilistic system models arise when we have the opportunity to control the system. In such problems we want to select from among the alternatives available for the operation of the system that are most rewarding. In this paper, commonly used algorithms such as value iteration and several version of modified policy iteration are compared. Policy iteration is usually recommended as yielding better result. But our results show policy iteration applied to non-discounted model without special restrictions might not converge to an optimal policy. We proposed the combined value- policy iteration as a better option.