RANDOM WALKS RELATIVE TO MULTIPLE TRANSITION MATRICES

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Abstract. Given the cost matrix corresponding to transitions between states, the mean of the cost along a random walk of a prescribed length needs to be computed in many applications. We introduce a generalization of the model for multiple transition and cost matrices and propose Monte Carlo techniques to solve it. Experiments on artificial data and a small example of simulated bike sharing system are conducted to evaluate the performance of the presented approaches in comparison with the ones based on computing powers of matrices.

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