

## Roulette Wheel Selection Mechanism for Solving Travelling Salesman Problem in Ant Colony Optimization

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**Abstract :** In this paper, we have use an algorithm that able to obtain an optimal solution to travelling salesman problem from a huge search space, quickly. This algorithm is based upon the ant colony optimization technique and employees roulette wheel selection mechanism. To illustrate it more clearly, a program has been implemented which is based upon this algorithm, that presents the changing process of route iteration in a more intuitive way. In the event, we had find the optimal path between hundred cities and also calculate the distance between two cities.

**Keywords :** ant colony, optimization, travelling salesman problem, roulette wheel selection

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