

# Determining Tourism Route in Bandung Using Cat Swarm Optimization Algorithm

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## Abstract

The city of Bandung is one of the tourist destinations for locals and foreigners. In the current era of modern technology, it's easy to find tourist destinations and everyone can plan their tour independently. In planning a tour, there is an important factor that is still ignored by tourist, namely the accessibility factor. Accessibility factor is an available convenience to reach tourist destinations. Referring to the problem, a tourist route scheduling system is built. This system is able to examine the degree of interest from user towards three criteria such as rates, ratings, and travel time. To get tourist route scheduling according to user criteria, use Multy-Attribute Utility Theory. The system is built by implementing the Cat Swarm Optimization (CSO) algorithm to get the optimal route. According to the test results when comparing the CSO algorithm with the Simulated Annealing (SA) algorithm based on the parameters of the number of output nodes, running time, and fitness values, that the CSO algorithm produces an optimal route based on the number of nodes and running time, while the fitness value generated by the CSO algorithm is still not good when compared to the SA algorithm. The average number of nodes generated by the CSO algorithm is 8.096, with an average running time of 0.506 seconds. While the average number of nodes generated by the SA algorithm is 7,649 with a running time of 0.639 seconds.

**Keyword :** *Cat Swarm Optimization, Multi-Attribute Utility Theory*

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