

Application of ant colony optimization (ACO) algorithm in the short route search for completing travelling problem (TP)

Abstract

Travelling in the community has become a lifestyle. Factors that become obstacles in every travelling activity include determining the destination. In this process, the traveler needs a short route. The Ant Colony algorithm is one of the heuristic methods for finding the right solution in a discrete optimization problem. The purpose of this study is to apply the workings of the Ant Colony Optimization algorithm in Travelling Problem. The information needed is information related to a location between cities and route planning for destination locations. The distance calculation is done by summing the initial distance to the end of the trip and calculating the cost of fuel. ACO has been applied to find optimal solutions to the Travelling Salesman Problem, by giving a number of n points.

Keywords

Mathematical optimization, Optimization problem