

ABSTRACT

In sending items, time and costs can be minimized by selecting the shortest route. The problem of choosing the shortest route is often known as the Traveling Salesman Problem (TSP). Optimization of the search for the shortest route is modeled with genetic algorithms. There are two parameters used in route search, they are distance and priority. This study was conducted to add new features that can receive multi-purpose delivery based on distance and delivery priority. Delivery of multiple destinations in one area can be delivered with a single trip. We used 20 dummy data, which is each data has coordinates (x, y) and priority. The best probability of crossover (PC) and mutation probability (PM) in this study are 0.6 and 0.01. Then, the effect of the number of generations in this study is that the higher the generation, the higher the fitness value.

Keywords: traveling salesman problem, genetics algorithm, distance, priority.