INFO6205\_506 Final Project Report

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1. Background
2. GA

Genetic algorithm (GA) is a metaheuristic inspired by the process of natural selection that belongs to the larger class of evolutionary algorithms. Genetic algorithms are commonly used to generate high-quality solutions to optimization and search problems by relying on bio-inspired operators such as mutation, crossover and selection.

The flow of GA:

1. Traveling Salesman Problem

Travelling salesman problem (TSP) asks the following question: "Given a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city and returns to the origin city?" It is an NP-hard problem in combinatorial optimization

1. Our Goal

This project uses Genetic Algorithm to solve the Traveling Salesman Problem which means to find the shortest possible route for a salesman who travelled every city and back to his origin.

1. Implementation
2. Gene Code
3. Gene Expression
4. Fitness Function
5. Screenshot
6. Unit Test
7. Conclusion