Individual Report

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ECMM409 Nature-Inspired Computation

CA2: Solving Complex problems with Nature-inspired Computation.

Introduction

The objective of the individual report is to inform my contribution to the group project for the coursework in ECMM409 Nature-inspired Computation course on solving the complex problem, the Traveling Theft problem (TTP), with nature-inspired computation algorithms. The project involved developing algorithms for the TTP which is combination of the Traveling Salesman Problem (TSP) and the Knapsack problem (KP). The problem is defined as a multiple-objective due to the independencies between the difference components, including the time spent, and profit gathered by the theft.

I n this report, I will detail the specific areas of the project where I actively contributed, discuss the nature-inspired algorithms that we explored and applied, and reflect on the process of adapting these algorithms to meet the unique demands of the TTP. Through this exposition, I aim to provide a comprehensive view of my role in this collaborative endeavor and the insights gained from engaging with this complex optimization problem.