Project of: Evolutionary Algorithm for Solving the Subset Sum Problem

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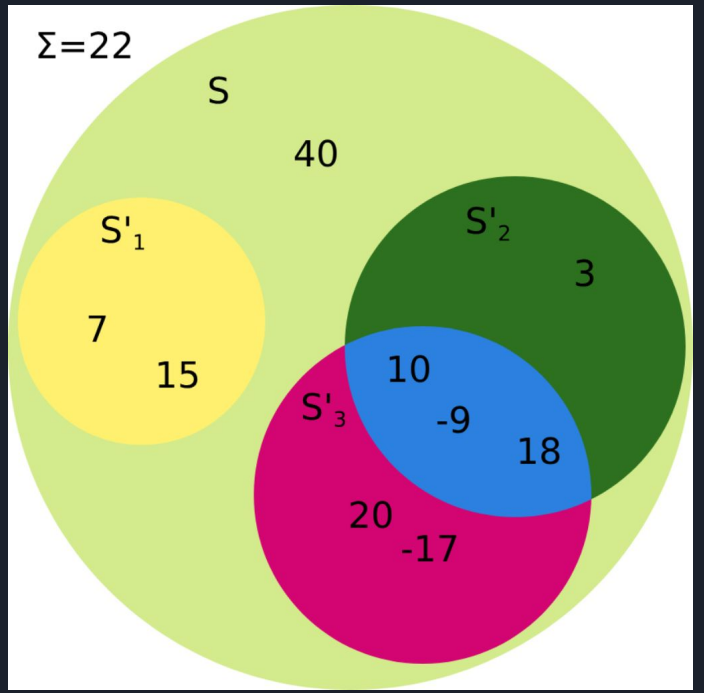
Two men are robbing a hotel.
“I hear sirens. Jump!” says the first one
“But we’re on the 13th floor” his fellow-thief replies.
“This is no time to be superstitious!”

Introduction

- Many NP problems can be solved using evolutionary algorithms
- Among such problems is subset sum problem

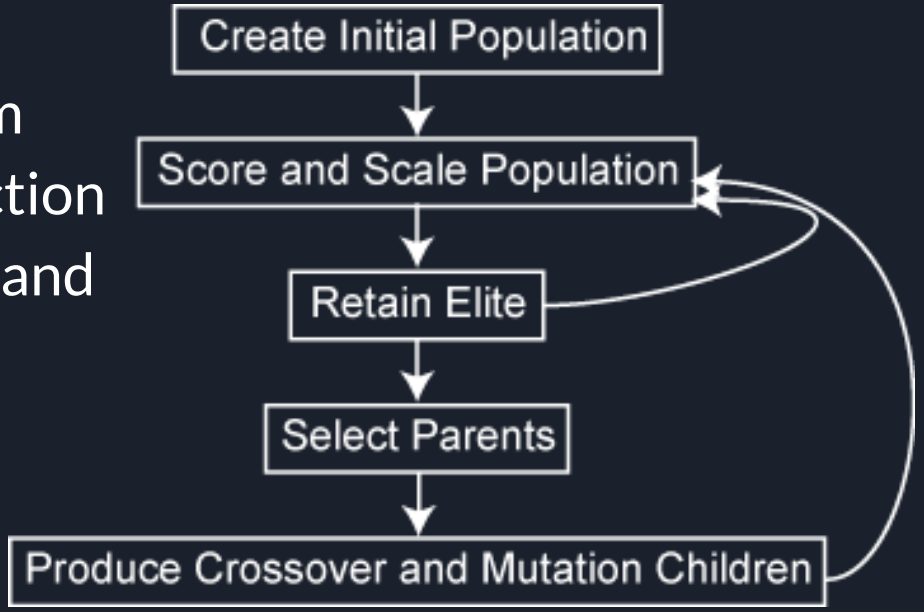
Subset sum problem

- Decide whether there exists a subset where sum of all elements is equal to target value
- NP-hard



Genetic algorithm

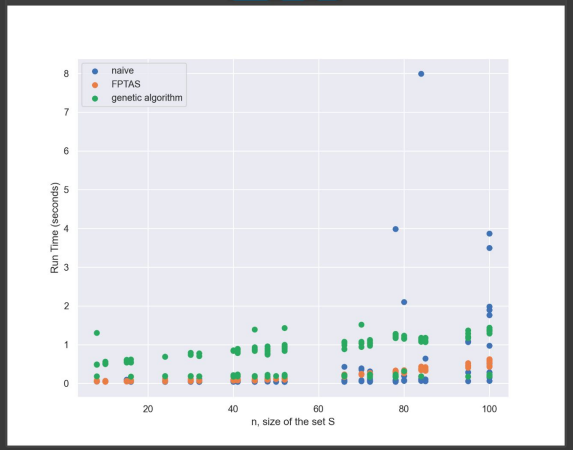
- Evolutionary algorithm
- Based on natural selection
- Used for optimization and search problems



Simulation results and conclusions

Run Tests | About the Project

Accuracy | Score | Time



Choose dataset

Drag and drop directory here

negative

Browse

Add solutions

naive

FPTAS

genetic algorithm

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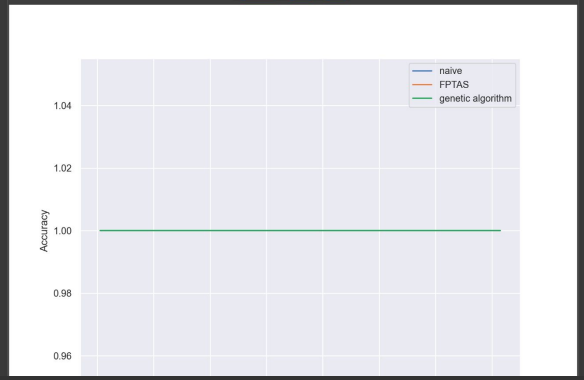

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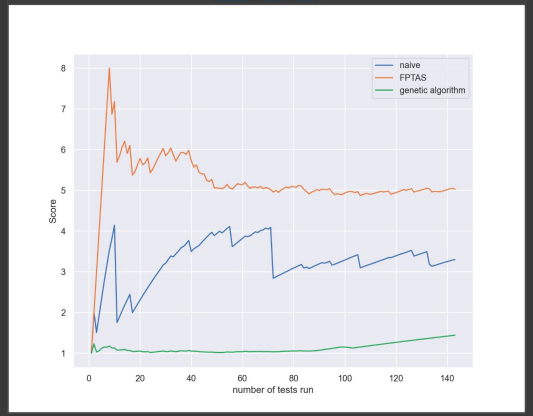

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Run

Comparison of solutions

FTPAS - the fastest with highest score

Genetic algorithm - slower than FTPAS with the lowest score

Naive algorithm - the slowest with average score

Thank you for your attention!