**Laborator 3**

**Knapsack problem - AE:**

Valori locale:

weights = [6, 3, 2, 4, 5, 8, 9, 2, 1, 3, 5, 3, 7, 8]  
values = [2, 2, 5, 9, 2, 2, 5, 9, 2, 2, 5, 9, 2, 1]  
numberOfObjects = 14  
backpackCapacity = 50

population\_size = 1000

generations = 10

crossover\_rate = 0.8

mutation\_rate = 0.02

|  |  |  |  |
| --- | --- | --- | --- |
| **Instanta** |  | **Best 10 rulari** | **Average 10 rulari** |
| rucsac-20.txt |  | 757 | 640 |
| rucsac-200.txt |  | 96619 | 86691.299 |
| valori locale |  | 52 | 46.6 |

Best-ul reprezinta configuratia cu cea mai mare valoare

Observam ca average-ul si k-ul sunt invers proportionale(cu cat creste k-ul, scade average-ul)

**TSP problem - Tabu Search:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Instanta** | **k** | **Best 10 rulari** | **Average 10 rulari** |
| pr124.tsp | 1 | 510309.9 | 5096197.2 |
| pr124.tsp | 3 | 517425.8 | 5131060.9 |
| pr124.tsp | 5 | 506791.4 | 5081800.2 |