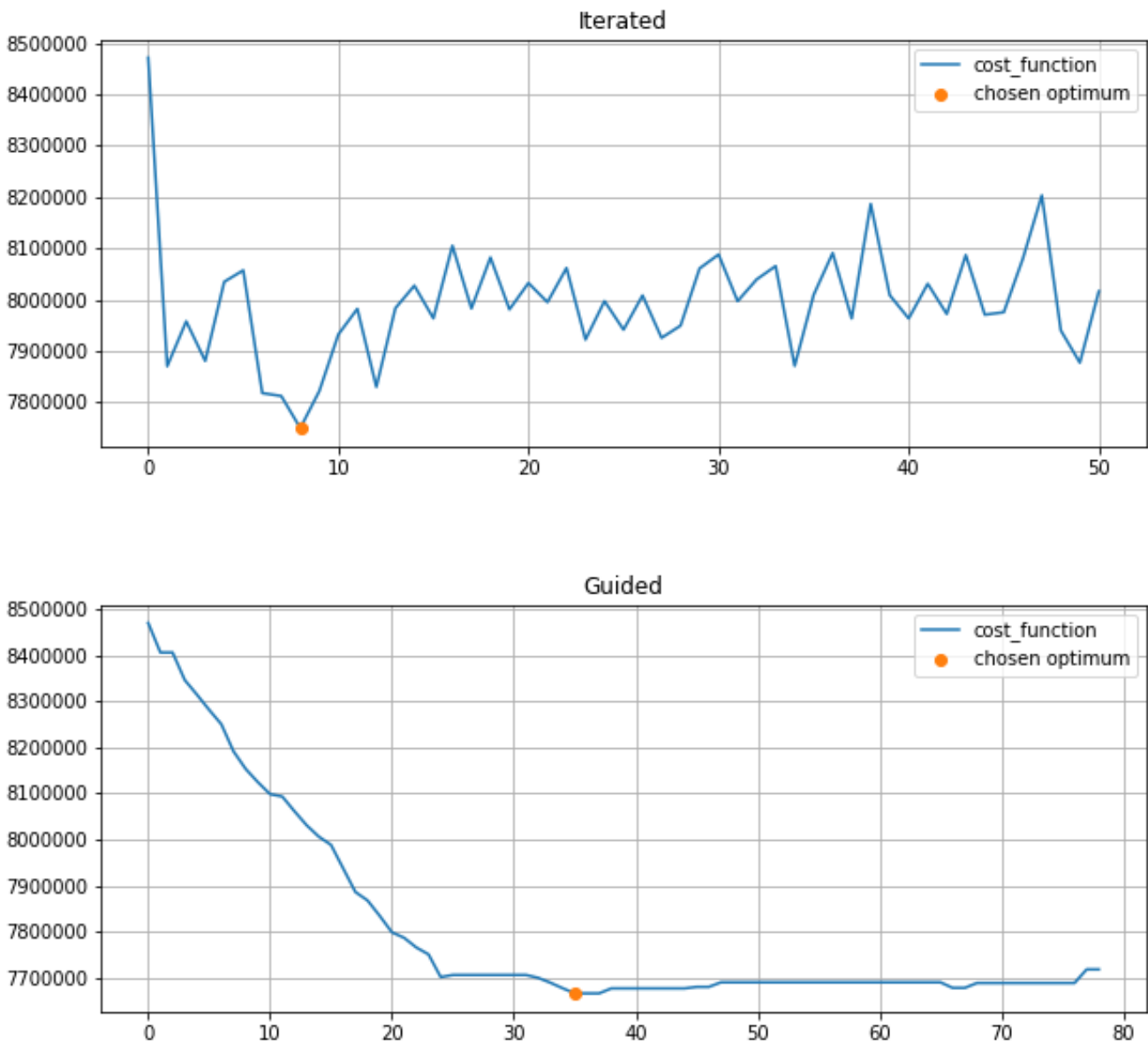


Лабораторная работа №3. Локальный поиск

Илья Седунов,
Вадим Альперович,
17ПМИ

Cost function history for tai60a



Benchmark: tai20a has 20 items and locations

- Best known solution cost: 703482
- Initial solution cost: 873908
 - **Local Search** optimal cost **747858** (exec time 0.06 seconds)
 - **Iterated Local Search** optimal cost **742752** (exec time 2.92 seconds)
 - **Guided Local Search** optimal cost **717222** (exec time 0.65 seconds)

Benchmark: tai40a has 40 items and locations

- Best known solution cost: 3139370
- Initial solution cost: 3853396
 - **Local Search** optimal cost **3481496** (exec time 0.16 seconds)
 - **Iterated Local Search** optimal cost **3361050** (exec time 12.22 seconds)
 - **Guided Local Search** optimal cost **3325712** (exec time 1.46 seconds)

Benchmark: tai60a has 60 items and locations

- Best known solution cost: 7205962
- Initial solution cost: 8484364
 - **Local Search** optimal cost **7959112** (exec time 0.64 seconds)
 - **Iterated Local Search** optimal cost **7754148** (exec time 22.11 seconds)
 - **Guided Local Search** optimal cost **7656154** (exec time 3.82 seconds)

Benchmark: tai80a has 80 items and locations

- Best known solution cost: 13515450
- Initial solution cost: 15707292
 - **Local Search** optimal cost **14924312** (exec time 0.78 seconds)
 - **Iterated Local Search** optimal cost **14773828** (exec time 36.07 seconds)
 - **Guided Local Search** optimal cost **14460422** (exec time 8.67 seconds)

Benchmark: tai100a has 100 items and locations

- Best known solution cost: 21054656
- Initial solution cost: 24149696
 - **Local Search** optimal cost **23556992** (exec time 0.33 seconds)
 - **Iterated Local Search** optimal cost **23037370** (exec time 51.95 seconds)
 - **Guided Local Search** optimal cost **22139380** (exec time 20.34 seconds) Wall time: 2min 42s

Comparison:

Used 3 observations

benchmark	best_known_cost	algorithm	mean_alg_cost	mean_exec_time
data\tai20a	703482	Guided	749870	0.2
data\tai20a	703482	Iterated	731518	2.9
data\tai20a	703482	LocalSearch	763320	0.1
data\tai40a	3139370	Guided	3320935	1.5
data\tai40a	3139370	Iterated	3349834	12.5
data\tai40a	3139370	LocalSearch	3430242	0.2
data\tai60a	7205962	Guided	7683911	3.9
data\tai60a	7205962	Iterated	7793235	23
data\tai60a	7205962	LocalSearch	7979503	0.4
data\tai80a	13515450	Guided	14326908	9.6
data\tai80a	13515450	Iterated	14752530	34.1
data\tai80a	13515450	LocalSearch	15053247	0.5
data\tai100a	21054656	Guided	22197873	22.3
data\tai100a	21054656	Iterated	23035250	50.2
data\tai100a	21054656	LocalSearch	23428402	1