# Config

Birds=200

moveRandom = 0.1589684022681154

moveBest = 0.4624556400235943

moveJoin = 0.33611898159023834

smallBirdRatio = 0.6979749881176104

maxIters = 4\_000\_000

# Benchmark

Combined Results:

Avg. Distance: 1 822 014

Avg. Time: 15,0759 seconds

Median Distance: 608721

Median Time: 7,105 seconds

Median abs Error: 433 352.5

Mean abs Error: 1 520 067

# Swap cities for local search

Avg. Distance: 3802648

Avg. Time: 6,3799 seconds

Median Distance: 1452161

Median Time: 2,712 seconds

2-opt local search without density estimation:

Avg. distance: 2802130

Avg. time 7,5544

TopN (0.25)

Combined Results:

Avg. Distance: 1 195 492

Avg. Time: 15,368 seconds

Median Distance: 392 208

Median Time: 7,4291 seconds

Median abs Error: 216 839.5

Mean abs Error: 893 544

TopN (0.20)

Combined Results:

Avg. Distance: 1 094 916

Avg. Time: 15,2137 seconds

Median Distance: 369 203

Median Time: 7,4545 seconds

Median abs Error: 193 834.0

Mean abs Error: 792 969

TopN (0.15)

Combined Results:

Avg. Distance: 992 959

Avg. Time: 15,6552 seconds

Median Distance: 327 205

Median Time: 7,668 seconds

Median abs Error: 151 836.5

Mean abs Error: 691 011