

Результаты подбора параметров

/home/jks/sharpi/nsu_labs/strategy_hackathon/strategy_hackathon/bin/Debug/net8.0/strategy_hackathon
Starting parameter optimization...

Testing: PopulationSize=20, Generations=20, MutationRate=0.20
Average Harmonic Satisfaction: 16.78
Execution Time: 13.57 seconds

Testing: PopulationSize=20, Generations=20, MutationRate=0.30
Average Harmonic Satisfaction: 16.76
Execution Time: 14.44 seconds

Testing: PopulationSize=20, Generations=20, MutationRate=0.40
Average Harmonic Satisfaction: 16.76
Execution Time: 15.25 seconds

Testing: PopulationSize=20, Generations=20, MutationRate=0.50
Average Harmonic Satisfaction: 16.75
Execution Time: 16.71 seconds

Testing: PopulationSize=20, Generations=20, MutationRate=0.60
Average Harmonic Satisfaction: 16.78
Execution Time: 17.33 seconds

Testing: PopulationSize=20, Generations=30, MutationRate=0.20
Average Harmonic Satisfaction: 16.75
Execution Time: 17.52 seconds

Testing: PopulationSize=20, Generations=30, MutationRate=0.30
Average Harmonic Satisfaction: 16.73

Execution Time: 18.77 seconds

Testing: PopulationSize=20, Generations=30, MutationRate=0.40

Average Harmonic Satisfaction: 16.77

Execution Time: 20.42 seconds

Testing: PopulationSize=20, Generations=30, MutationRate=0.50

Average Harmonic Satisfaction: 16.72

Execution Time: 22.12 seconds

Testing: PopulationSize=20, Generations=30, MutationRate=0.60

Average Harmonic Satisfaction: 16.79

Execution Time: 23.75 seconds

Testing: PopulationSize=20, Generations=40, MutationRate=0.20

Average Harmonic Satisfaction: 16.78

Execution Time: 21.93 seconds

Testing: PopulationSize=20, Generations=40, MutationRate=0.30

Average Harmonic Satisfaction: 16.72

Execution Time: 24.41 seconds

Testing: PopulationSize=20, Generations=40, MutationRate=0.40

Average Harmonic Satisfaction: 16.77

Execution Time: 26.79 seconds

Testing: PopulationSize=20, Generations=40, MutationRate=0.50

Average Harmonic Satisfaction: 16.75

Execution Time: 28.68 seconds

Testing: PopulationSize=20, Generations=40, MutationRate=0.60

Average Harmonic Satisfaction: 16.75

Execution Time: 30.70 seconds

Testing: PopulationSize=20, Generations=50, MutationRate=0.20
Average Harmonic Satisfaction: 16.71
Execution Time: 26.09 seconds

Testing: PopulationSize=20, Generations=50, MutationRate=0.30
Average Harmonic Satisfaction: 16.75
Execution Time: 29.14 seconds

Testing: PopulationSize=20, Generations=50, MutationRate=0.40
Average Harmonic Satisfaction: 16.72
Execution Time: 32.40 seconds

Testing: PopulationSize=20, Generations=50, MutationRate=0.50
Average Harmonic Satisfaction: 16.68
Execution Time: 36.01 seconds

Testing: PopulationSize=20, Generations=50, MutationRate=0.60
Average Harmonic Satisfaction: 16.80
Execution Time: 38.87 seconds

Testing: PopulationSize=20, Generations=60, MutationRate=0.20
Average Harmonic Satisfaction: 16.75
Execution Time: 31.40 seconds

Testing: PopulationSize=20, Generations=60, MutationRate=0.30
Average Harmonic Satisfaction: 16.75
Execution Time: 34.21 seconds

Testing: PopulationSize=20, Generations=60, MutationRate=0.40
Average Harmonic Satisfaction: 16.80
Execution Time: 37.45 seconds

Testing: PopulationSize=20, Generations=60, MutationRate=0.50
Average Harmonic Satisfaction: 16.75
Execution Time: 41.23 seconds

Testing: PopulationSize=20, Generations=60, MutationRate=0.60
Average Harmonic Satisfaction: 16.74
Execution Time: 46.38 seconds

Testing: PopulationSize=30, Generations=20, MutationRate=0.20
Average Harmonic Satisfaction: 16.77
Execution Time: 20.19 seconds

Testing: PopulationSize=30, Generations=20, MutationRate=0.30
Average Harmonic Satisfaction: 16.73
Execution Time: 22.56 seconds

Testing: PopulationSize=30, Generations=20, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 23.25 seconds

Testing: PopulationSize=30, Generations=20, MutationRate=0.50
Average Harmonic Satisfaction: 16.73
Execution Time: 25.65 seconds

Testing: PopulationSize=30, Generations=20, MutationRate=0.60
Average Harmonic Satisfaction: 16.74
Execution Time: 26.49 seconds

Testing: PopulationSize=30, Generations=30, MutationRate=0.20
Average Harmonic Satisfaction: 16.71
Execution Time: 26.60 seconds

Testing: PopulationSize=30, Generations=30, MutationRate=0.30
Average Harmonic Satisfaction: 16.75
Execution Time: 28.85 seconds

Testing: PopulationSize=30, Generations=30, MutationRate=0.40
Average Harmonic Satisfaction: 16.76
Execution Time: 31.91 seconds

Testing: PopulationSize=30, Generations=30, MutationRate=0.50
Average Harmonic Satisfaction: 16.76
Execution Time: 34.78 seconds

Testing: PopulationSize=30, Generations=30, MutationRate=0.60
Average Harmonic Satisfaction: 16.70
Execution Time: 37.72 seconds

Testing: PopulationSize=30, Generations=40, MutationRate=0.20
Average Harmonic Satisfaction: 16.72
Execution Time: 34.61 seconds

Testing: PopulationSize=30, Generations=40, MutationRate=0.30
Average Harmonic Satisfaction: 16.77
Execution Time: 37.57 seconds

Testing: PopulationSize=30, Generations=40, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 43.18 seconds

Testing: PopulationSize=30, Generations=40, MutationRate=0.50
Average Harmonic Satisfaction: 16.73
Execution Time: 46.52 seconds

Testing: PopulationSize=30, Generations=40, MutationRate=0.60
Average Harmonic Satisfaction: 16.79
Execution Time: 48.80 seconds

Testing: PopulationSize=30, Generations=50, MutationRate=0.20
Average Harmonic Satisfaction: 16.77
Execution Time: 41.50 seconds

Testing: PopulationSize=30, Generations=50, MutationRate=0.30
Average Harmonic Satisfaction: 16.76
Execution Time: 46.13 seconds

Testing: PopulationSize=30, Generations=50, MutationRate=0.40
Average Harmonic Satisfaction: 16.79
Execution Time: 51.34 seconds

Testing: PopulationSize=30, Generations=50, MutationRate=0.50
Average Harmonic Satisfaction: 16.81
Execution Time: 55.04 seconds

Testing: PopulationSize=30, Generations=50, MutationRate=0.60
Average Harmonic Satisfaction: 16.77
Execution Time: 61.21 seconds

Testing: PopulationSize=30, Generations=60, MutationRate=0.20
Average Harmonic Satisfaction: 16.78
Execution Time: 50.75 seconds

Testing: PopulationSize=30, Generations=60, MutationRate=0.30
Average Harmonic Satisfaction: 16.72
Execution Time: 54.80 seconds

Testing: PopulationSize=30, Generations=60, MutationRate=0.40
Average Harmonic Satisfaction: 16.72
Execution Time: 60.09 seconds

Testing: PopulationSize=30, Generations=60, MutationRate=0.50
Average Harmonic Satisfaction: 16.76
Execution Time: 64.65 seconds

Testing: PopulationSize=30, Generations=60, MutationRate=0.60
Average Harmonic Satisfaction: 16.79
Execution Time: 69.99 seconds

Testing: PopulationSize=40, Generations=20, MutationRate=0.20
Average Harmonic Satisfaction: 16.80
Execution Time: 27.06 seconds

Testing: PopulationSize=40, Generations=20, MutationRate=0.30
Average Harmonic Satisfaction: 16.70
Execution Time: 30.06 seconds

Testing: PopulationSize=40, Generations=20, MutationRate=0.40
Average Harmonic Satisfaction: 16.71
Execution Time: 32.22 seconds

Testing: PopulationSize=40, Generations=20, MutationRate=0.50
Average Harmonic Satisfaction: 16.76
Execution Time: 34.01 seconds

Testing: PopulationSize=40, Generations=20, MutationRate=0.60
Average Harmonic Satisfaction: 16.74
Execution Time: 35.76 seconds

Testing: PopulationSize=40, Generations=30, MutationRate=0.20
Average Harmonic Satisfaction: 16.74
Execution Time: 37.14 seconds

Testing: PopulationSize=40, Generations=30, MutationRate=0.30
Average Harmonic Satisfaction: 16.76
Execution Time: 40.95 seconds

Testing: PopulationSize=40, Generations=30, MutationRate=0.40
Average Harmonic Satisfaction: 16.77
Execution Time: 43.86 seconds

Testing: PopulationSize=40, Generations=30, MutationRate=0.50
Average Harmonic Satisfaction: 16.74
Execution Time: 47.83 seconds

Testing: PopulationSize=40, Generations=30, MutationRate=0.60
Average Harmonic Satisfaction: 16.71
Execution Time: 52.41 seconds

Testing: PopulationSize=40, Generations=40, MutationRate=0.20
Average Harmonic Satisfaction: 16.78
Execution Time: 48.79 seconds

Testing: PopulationSize=40, Generations=40, MutationRate=0.30
Average Harmonic Satisfaction: 16.77
Execution Time: 52.36 seconds

Testing: PopulationSize=40, Generations=40, MutationRate=0.40
Average Harmonic Satisfaction: 16.75
Execution Time: 57.29 seconds

Testing: PopulationSize=40, Generations=40, MutationRate=0.50
Average Harmonic Satisfaction: 16.77
Execution Time: 61.31 seconds

Testing: PopulationSize=40, Generations=40, MutationRate=0.60
Average Harmonic Satisfaction: 16.73
Execution Time: 66.90 seconds

Testing: PopulationSize=40, Generations=50, MutationRate=0.20
Average Harmonic Satisfaction: 16.76
Execution Time: 58.01 seconds

Testing: PopulationSize=40, Generations=50, MutationRate=0.30
Average Harmonic Satisfaction: 16.78
Execution Time: 63.76 seconds

Testing: PopulationSize=40, Generations=50, MutationRate=0.40
Average Harmonic Satisfaction: 16.75
Execution Time: 70.31 seconds

Testing: PopulationSize=40, Generations=50, MutationRate=0.50
Average Harmonic Satisfaction: 16.78
Execution Time: 76.65 seconds

Testing: PopulationSize=40, Generations=50, MutationRate=0.60
Average Harmonic Satisfaction: 16.79
Execution Time: 82.99 seconds

Testing: PopulationSize=40, Generations=60, MutationRate=0.20
Average Harmonic Satisfaction: 16.76
Execution Time: 66.77 seconds

Testing: PopulationSize=40, Generations=60, MutationRate=0.30
Average Harmonic Satisfaction: 16.75
Execution Time: 73.92 seconds

Testing: PopulationSize=40, Generations=60, MutationRate=0.40
Average Harmonic Satisfaction: 16.78
Execution Time: 82.86 seconds

Testing: PopulationSize=40, Generations=60, MutationRate=0.50
Average Harmonic Satisfaction: 16.82
Execution Time: 89.34 seconds

Testing: PopulationSize=40, Generations=60, MutationRate=0.60
Average Harmonic Satisfaction: 16.79
Execution Time: 98.01 seconds

Testing: PopulationSize=50, Generations=20, MutationRate=0.20
Average Harmonic Satisfaction: 16.72
Execution Time: 34.94 seconds

Testing: PopulationSize=50, Generations=20, MutationRate=0.30
Average Harmonic Satisfaction: 16.74
Execution Time: 37.96 seconds

Testing: PopulationSize=50, Generations=20, MutationRate=0.40
Average Harmonic Satisfaction: 16.76
Execution Time: 41.01 seconds

Testing: PopulationSize=50, Generations=20, MutationRate=0.50
Average Harmonic Satisfaction: 16.79
Execution Time: 42.45 seconds

Testing: PopulationSize=50, Generations=20, MutationRate=0.60
Average Harmonic Satisfaction: 16.75
Execution Time: 45.58 seconds

Testing: PopulationSize=50, Generations=30, MutationRate=0.20
Average Harmonic Satisfaction: 16.77
Execution Time: 48.74 seconds

Testing: PopulationSize=50, Generations=30, MutationRate=0.30
Average Harmonic Satisfaction: 16.71
Execution Time: 53.75 seconds

Testing: PopulationSize=50, Generations=30, MutationRate=0.40
Average Harmonic Satisfaction: 16.78
Execution Time: 56.92 seconds

Testing: PopulationSize=50, Generations=30, MutationRate=0.50
Average Harmonic Satisfaction: 16.77
Execution Time: 61.03 seconds

Testing: PopulationSize=50, Generations=30, MutationRate=0.60
Average Harmonic Satisfaction: 16.81
Execution Time: 66.72 seconds

Testing: PopulationSize=50, Generations=40, MutationRate=0.20
Average Harmonic Satisfaction: 16.74
Execution Time: 62.28 seconds

Testing: PopulationSize=50, Generations=40, MutationRate=0.30
Average Harmonic Satisfaction: 16.81
Execution Time: 68.52 seconds

Testing: PopulationSize=50, Generations=40, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 73.66 seconds

Testing: PopulationSize=50, Generations=40, MutationRate=0.50
Average Harmonic Satisfaction: 16.82
Execution Time: 81.32 seconds

Testing: PopulationSize=50, Generations=40, MutationRate=0.60
Average Harmonic Satisfaction: 16.78
Execution Time: 86.53 seconds

Testing: PopulationSize=50, Generations=50, MutationRate=0.20
Average Harmonic Satisfaction: 16.80
Execution Time: 72.19 seconds

Testing: PopulationSize=50, Generations=50, MutationRate=0.30
Average Harmonic Satisfaction: 16.80
Execution Time: 81.30 seconds

Testing: PopulationSize=50, Generations=50, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 91.56 seconds

Testing: PopulationSize=50, Generations=50, MutationRate=0.50
Average Harmonic Satisfaction: 16.78
Execution Time: 96.92 seconds

Testing: PopulationSize=50, Generations=50, MutationRate=0.60
Average Harmonic Satisfaction: 16.78
Execution Time: 108.18 seconds

Testing: PopulationSize=50, Generations=60, MutationRate=0.20
Average Harmonic Satisfaction: 16.74
Execution Time: 87.20 seconds

Testing: PopulationSize=50, Generations=60, MutationRate=0.30
Average Harmonic Satisfaction: 16.83
Execution Time: 98.92 seconds

Testing: PopulationSize=50, Generations=60, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 105.70 seconds

Testing: PopulationSize=50, Generations=60, MutationRate=0.50
Average Harmonic Satisfaction: 16.73
Execution Time: 116.09 seconds

Testing: PopulationSize=50, Generations=60, MutationRate=0.60
Average Harmonic Satisfaction: 16.73
Execution Time: 126.51 seconds

Testing: PopulationSize=60, Generations=20, MutationRate=0.20
Average Harmonic Satisfaction: 16.81
Execution Time: 42.73 seconds

Testing: PopulationSize=60, Generations=20, MutationRate=0.30
Average Harmonic Satisfaction: 16.76
Execution Time: 47.15 seconds

Testing: PopulationSize=60, Generations=20, MutationRate=0.40
Average Harmonic Satisfaction: 16.76
Execution Time: 50.94 seconds

Testing: PopulationSize=60, Generations=20, MutationRate=0.50
Average Harmonic Satisfaction: 16.72
Execution Time: 53.89 seconds

Testing: PopulationSize=60, Generations=20, MutationRate=0.60
Average Harmonic Satisfaction: 16.78
Execution Time: 55.79 seconds

Testing: PopulationSize=60, Generations=30, MutationRate=0.20
Average Harmonic Satisfaction: 16.77
Execution Time: 60.00 seconds

Testing: PopulationSize=60, Generations=30, MutationRate=0.30
Average Harmonic Satisfaction: 16.78
Execution Time: 65.26 seconds

Testing: PopulationSize=60, Generations=30, MutationRate=0.40
Average Harmonic Satisfaction: 16.80
Execution Time: 69.20 seconds

Testing: PopulationSize=60, Generations=30, MutationRate=0.50
Average Harmonic Satisfaction: 16.76
Execution Time: 77.68 seconds

Testing: PopulationSize=60, Generations=30, MutationRate=0.60
Average Harmonic Satisfaction: 16.72
Execution Time: 82.01 seconds

Testing: PopulationSize=60, Generations=40, MutationRate=0.20
Average Harmonic Satisfaction: 16.75
Execution Time: 75.10 seconds

Testing: PopulationSize=60, Generations=40, MutationRate=0.30
Average Harmonic Satisfaction: 16.77
Execution Time: 83.34 seconds

Testing: PopulationSize=60, Generations=40, MutationRate=0.40
Average Harmonic Satisfaction: 16.73
Execution Time: 89.75 seconds

Testing: PopulationSize=60, Generations=40, MutationRate=0.50
Average Harmonic Satisfaction: 16.78
Execution Time: 98.06 seconds

Testing: PopulationSize=60, Generations=40, MutationRate=0.60
Average Harmonic Satisfaction: 16.74
Execution Time: 105.21 seconds

Testing: PopulationSize=60, Generations=50, MutationRate=0.20
Average Harmonic Satisfaction: 16.75
Execution Time: 92.04 seconds

Testing: PopulationSize=60, Generations=50, MutationRate=0.30
Average Harmonic Satisfaction: 16.78
Execution Time: 100.90 seconds

Testing: PopulationSize=60, Generations=50, MutationRate=0.40
Average Harmonic Satisfaction: 16.79
Execution Time: 111.15 seconds

Testing: PopulationSize=60, Generations=50, MutationRate=0.50
Average Harmonic Satisfaction: 16.82
Execution Time: 117.12 seconds

Testing: PopulationSize=60, Generations=50, MutationRate=0.60
Average Harmonic Satisfaction: 16.81
Execution Time: 129.93 seconds

Testing: PopulationSize=60, Generations=60, MutationRate=0.20
Average Harmonic Satisfaction: 16.76
Execution Time: 103.43 seconds

Testing: PopulationSize=60, Generations=60, MutationRate=0.30
Average Harmonic Satisfaction: 16.75
Execution Time: 120.22 seconds

Testing: PopulationSize=60, Generations=60, MutationRate=0.40
Average Harmonic Satisfaction: 16.74
Execution Time: 128.75 seconds

Testing: PopulationSize=60, Generations=60, MutationRate=0.50
Average Harmonic Satisfaction: 16.75
Execution Time: 142.52 seconds

Testing: PopulationSize=60, Generations=60, MutationRate=0.60
Average Harmonic Satisfaction: 16.75
Execution Time: 153.35 seconds

Optimal Parameters Found:

PopulationSize: 50

Generations: 60

MutationRate: 0.30

Average Harmonic Satisfaction: 16.83

Execution Time: 98.92 seconds

Process finished with exit code 0.