

Table 1: Performance Results for NoisySphere_10D_sigma0.01 Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
L-BFGS-Conservative	9.49e0	1.72e-1	9.16e0	9.70e0	93.8	85.0	0.006
L-BFGS-Limited	9.06e0	1.17e0	6.79e0	1.08e1	32.2	45.0	0.002
QQN-Bisection-1	9.08e0	1.54e0	4.69e0	1.10e1	55.0	45.0	0.016
GD-AdaptiveMomentum	1.03e1	7.39e-1	9.45e0	1.20e1	8.0	35.0	0.002
QQN-StrongWolfe	9.41e0	1.31e0	7.23e0	1.10e1	19.9	25.0	0.002
L-BFGS	2.28e1	1.18e1	7.46e0	4.18e1	31.4	20.0	0.002
GD-Nesterov	1.09e1	8.10e-1	9.63e0	1.25e1	7.5	15.0	0.002
Adam-Fast	1.11e1	1.47e0	9.46e0	1.54e1	9.7	15.0	0.002
GD-Momentum	1.11e1	9.34e-1	9.66e0	1.26e1	6.8	10.0	0.002
GD	1.10e1	7.03e-1	9.54e0	1.19e1	10.2	10.0	0.003
L-BFGS-MoreThuente	9.77e0	1.48e0	6.61e0	1.14e1	12.4	10.0	0.002
GD-WeightDecay	1.10e1	7.21e-1	9.66e0	1.25e1	6.0	5.0	0.002
Adam-Robust	1.05e1	6.12e-1	9.71e0	1.19e1	18.1	5.0	0.003
QQN-GoldenSection	1.03e1	5.55e-1	9.18e0	1.11e1	22.1	5.0	0.002
Trust Region-Adaptive	1.04e1	6.06e-1	9.73e0	1.17e1	2.8	0.0	0.000
Adam-AMSGrad	1.04e1	6.28e-1	9.75e0	1.18e1	18.9	0.0	0.004
L-BFGS-Aggressive	1.06e1	5.02e-1	9.75e0	1.11e1	5.4	0.0	0.001
Trust Region-Aggressive	1.04e1	5.45e-1	9.77e0	1.14e1	3.5	0.0	0.001
Adam-WeightDecay	1.04e1	4.40e-1	9.79e0	1.14e1	28.9	0.0	0.005
Trust Region-Standard	1.06e1	5.93e-1	9.80e0	1.16e1	3.2	0.0	0.000
Trust Region-Conservative	1.04e1	3.84e-1	9.82e0	1.13e1	6.4	0.0	0.001
Adam	1.07e1	5.64e-1	9.87e0	1.20e1	18.2	0.0	0.003
Trust Region-Precise	1.06e1	3.31e-1	9.93e0	1.12e1	4.8	0.0	0.001
QQN-CubicQuadraticInterpolation	1.04e1	1.61e-1	1.03e1	1.07e1	1.9	0.0	0.000