Table 1: Performance Results for GoldsteinPrice_2D Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
L-BFGS-Limited	8.41e1	3.33e-1	8.40e1	8.54e1	4259.4	0.0	0.038
L-BFGS-Aggressive	8.60e2	1.24e1	8.43e2	9.02e2	3847.0	0.0	0.033
Trust Region-Conservative	2.12e3	1.02e3	8.97e2	4.67e3	3002.0	0.0	0.018
Trust Region-Precise	2.20e3	1.09e3	8.40e2	4.16e3	2943.8	0.0	0.018
Trust Region-Adaptive	2.09e3	1.19e3	8.40e2	4.29e3	2649.8	0.0	0.016
QQN-StrongWolfe	8.34e1	2.81e0	7.11e1	8.40e1	552.0	15.0	0.014
Adam-AMSGrad	8.40e2	3.17e-2	8.40e2	8.40e2	603.6	0.0	0.014
Adam	8.40e2	3.55e-2	8.40e2	8.40e2	597.1	0.0	0.012
QQN-CubicQuadraticInterpolation	2.71e2	3.24e2	8.40e1	8.40e2	291.6	15.0	0.011
L-BFGS-MoreThuente	1.19e2	1.66e2	2.24e1	8.40e2	621.9	5.0	0.010
Trust Region-Standard	1.22e3	6.11e2	8.40e2	2.65e3	1684.8	0.0	0.010
QQN-Bisection-1	8.40e1	1.50e-11	8.40e1	8.40e1	362.8	20.0	0.010
QQN-GoldenSection	8.40e1	3.02e-11	8.40e1	8.40e1	383.2	35.0	0.006
L-BFGS-Conservative	8.44e2	1.17e1	8.40e2	8.81e2	346.4	0.0	0.005
Adam-WeightDecay	8.40e2	2.73e-1	8.40e2	8.41e2	209.7	0.0	0.005
Trust Region-Aggressive	9.54e2	4.95e2	8.40e2	3.11e3	725.5	0.0	0.005
L-BFGS	8.00e2	8.72e2	6.35e1	3.89e3	176.8	5.0	0.003
Adam-Robust	8.41e2	1.02e0	8.40e2	8.43e2	81.0	0.0	0.002
QQN-Bisection-2	1.58e2	1.99e2	8.40e1	8.40e2	21.2	5.0	0.001
GD-Nesterov	8.57e2	1.92e1	8.40e2	9.22e2	24.6	0.0	0.001
Adam-Fast	8.55e2	1.83e1	8.40e2	9.15e2	35.3	0.0	0.001
GD-AdaptiveMomentum	8.45e2	4.79e0	8.41e2	8.57e2	19.9	0.0	0.001
GD	8.50e2	4.11e0	8.41e2	8.55e2	24.6	0.0	0.001
GD-WeightDecay	8.57e2	1.90e1	8.40e2	9.08e2	20.3	0.0	0.001
GD-Momentum	8.98e2	2.94e2	9.88e1	1.93e3	17.9	0.0	0.000