

Table 1: Performance Results for Barrier_10D_mu0.1 Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
Adam-Robust	2.00e0	2.51e-3	2.00e0	2.01e0	2502.0	0.0	0.062
Adam-AMSGrad	2.04e0	1.32e-2	2.02e0	2.07e0	2502.0	0.0	0.062
Adam	2.00e0	4.64e-7	2.00e0	2.00e0	2502.0	0.0	0.056
Adam-WeightDecay	2.00e0	5.45e-9	2.00e0	2.00e0	1144.5	0.0	0.027
Trust Region-Conservative	2.05e0	5.65e-2	2.00e0	2.18e0	2487.1	0.0	0.018
L-BFGS-Conservative	2.00e0	1.04e-8	2.00e0	2.00e0	555.1	0.0	0.015
GD	2.00e0	4.28e-11	2.00e0	2.00e0	305.0	0.0	0.008
L-BFGS-Limited	2.00e0	5.46e-9	2.00e0	2.00e0	195.4	0.0	0.004
Trust Region-Precise	2.04e0	8.08e-2	2.00e0	2.37e0	413.8	0.0	0.003
GD-WeightDecay	2.00e0	1.69e-5	2.00e0	2.00e0	49.4	0.0	0.002
Trust Region-Adaptive	2.17e0	1.35e-1	2.00e0	2.37e0	106.3	0.0	0.001
Adam-Fast	2.58e0	8.67e-2	2.45e0	2.71e0	31.5	0.0	0.001
GD-Nesterov	2.50e0	4.65e-2	2.43e0	2.64e0	21.1	0.0	0.001
GD-Momentum	3.39e0	2.40e-1	2.91e0	3.84e0	21.2	0.0	0.001
Trust Region-Standard	2.34e0	4.45e-1	2.00e0	3.32e0	30.9	0.0	0.000
Trust Region-Aggressive	3.43e0	1.45e0	2.00e0	7.03e0	10.9	0.0	0.000