Table 1: Performance Results for Rosenbrock_5D Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
QQN-StrongWolfe	3.45e-1	4.37e-2	2.58e-1	3.95e-1	792.6	100.0	0.024
QQN-Bisection-1	6.94e-1	1.01e0	2.50e-1	4.64e0	1147.7	85.0	0.029
L-BFGS-MoreThuente	9.01e-1	1.03e0	2.37e-1	3.50e0	1090.7	70.0	0.019
QQN-CubicQuadraticInterpolation	4.25e-1	1.40e-1	2.38e-1	7.25e-1	1199.2	70.0	0.049
GD-WeightDecay	7.30e-1	1.08e0	3.59e-1	5.40e0	72.1	60.0	0.002
Adam-WeightDecay	2.07e0	2.05e0	3.93e-1	4.66e0	1128.9	60.0	0.025
QQN-Bisection-2	4.48e-1	1.63e-1	2.15e-1	9.11e-1	1588.3	55.0	0.038
QQN-GoldenSection	6.13e-1	3.74e-1	2.60e-1	1.61e0	3314.1	55.0	0.061
L-BFGS-Limited	4.21e-1	3.55e-2	3.92e-1	5.47e-1	3855.4	45.0	0.044
L-BFGS-Conservative	2.02e1	6.75e1	3.89e-1	3.11e2	3106.7	20.0	0.032
GD-Nesterov	4.24e0	5.00e0	3.90e-1	1.31e1	335.4	10.0	0.011
Adam-Fast	1.44e1	3.86e0	3.48e-1	1.86e1	44.4	5.0	0.001
Adam	3.92e0	4.66e-1	2.83e0	4.65e0	2471.6	0.0	0.050
Adam-AMSGrad	4.40e0	3.25e-1	3.25e0	4.82e0	2442.0	0.0	0.057
Trust Region-Aggressive	5.00e0	4.17e-1	4.66e0	5.93e0	776.1	0.0	0.005
Trust Region-Standard	6.23e1	7.73e1	4.66e0	2.53e2	2827.2	0.0	0.018
GD	5.09e0	1.48e-1	4.75e0	5.31e0	32.5	0.0	0.001
Adam-Robust	1.46e1	6.99e0	6.12e0	2.99e1	2502.0	0.0	0.059
L-BFGS-Aggressive	8.07e2	4.06e2	1.72e1	1.19e3	3851.6	0.0	0.028
GD-Momentum	3.55e1	8.91e0	1.96e1	4.95e1	20.8	0.0	0.001
L-BFGS	1.50e2	2.28e2	1.98e1	7.52e2	135.3	0.0	0.002
GD-AdaptiveMomentum	4.60e1	6.15e0	3.36e1	5.66e1	20.6	0.0	0.001
Trust Region-Adaptive	8.41e2	1.37e2	5.05e2	1.11e3	3002.0	0.0	0.019
Trust Region-Conservative	1.02e3	1.63e2	7.14e2	1.31e3	3002.0	0.0	0.019
Trust Region-Precise	1.01e3	1.27e2	8.08e2	1.35e3	3002.0	0.0	0.019