Table 1: Performance Results for StyblinskiTang_5$DProblem$

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
QQN-Bisection-2	-1.91×10^{2}	6.74	-1.96×10^{2}	-1.82×10^{2}	230.2	0.0	0.005
GD	-1.90×10^{2}	8.83	-1.96×10^{2}	-1.68×10^{2}	106.5	0.0	0.003
QQN-Bisection-1	-1.89×10^{2}	8.81	-1.96×10^{2}	-1.62×10^{2}	299.0	0.0	0.007
QQN-GoldenSection	-1.88×10^{2}	1.11×10^{1}	-1.96×10^{2}	-1.53×10^{2}	471.9	0.0	0.008
GD-WeightDecay	-1.85×10^{2}	1.27×10^{1}	-1.96×10^{2}	-1.56×10^{2}	76.7	0.0	0.002
GD-Nesterov	-1.85×10^{2}	1.41×10^{1}	-1.96×10^{2}	-1.47×10^{2}	51.8	0.0	0.002
QQN-StrongWolfe	-1.85×10^{2}	1.17×10^{1}	-1.96×10^{2}	-1.53×10^{2}	237.4	0.0	0.007
L-BFGS-Conservative	-1.85×10^{2}	1.17×10^{1}	-1.96×10^{2}	-1.53×10^{2}	553.9	0.0	0.014
QQN-Backtracking	-1.84×10^{2}	1.21×10^{1}	-1.96×10^{2}	-1.53×10^{2}	135.7	0.0	0.004
Adam-Fast	-1.82×10^{2}	9.72	-1.88×10^{2}	-1.48×10^{2}	72.3	0.0	0.001
Trust Region-Standard	-1.81×10^{2}	1.85×10^{1}	-1.96×10^{2}	-1.20×10^{2}	559.1	0.0	0.004
QQN-CubicQuadraticInterpolation	-1.80×10^{2}	1.50×10^{1}	-1.96×10^{2}	-1.39×10^{2}	294.3	0.0	0.010
L-BFGS	-1.78×10^{2}	1.20×10^{1}	-1.96×10^{2}	-1.49×10^{2}	154.2	0.0	0.002
GD-Momentum	-1.66×10^{2}	2.83×10^{1}	-1.96×10^{2}	-9.86×10^{1}	73.8	0.0	0.002
QQN-MoreThuente	-1.40×10^{2}	5.69×10^{1}	-1.96×10^{2}	-5.49×10^{1}	363.1	0.0	0.011
L-BFGS-Aggressive	-9.94×10^{1}	2.92×10^{1}	-1.63×10^{2}	-4.34×10^{1}	775.9	0.0	0.007
Trust Region-Adaptive	-5.06×10^{1}	6.99×10^{-1}	-5.21×10^{1}	-4.96×10^{1}	602.0	0.0	0.004
Adam-WeightDecay	-3.35×10^{1}	3.40	-3.92×10^{1}	-2.73×10^{1}	502.0	0.0	0.011
Adam-AMSGrad	-6.49	1.45	-9.30	-4.32	502.0	0.0	0.012
Adam	-6.44	1.88	-9.72	-3.11	502.0	0.0	0.010
Trust Region-Conservative	-2.51	7.47×10^{-1}	-3.84	-1.51	602.0	0.0	0.004