

Table 1: Performance Results for LogisticRegression_200samples_10features_reg0.01 Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
QQN-Bisection-2	3.23e-1	1.19e-12	3.23e-1	3.23e-1	110.7	0.0	0.065
QQN-GoldenSection	3.23e-1	1.79e-12	3.23e-1	3.23e-1	360.0	0.0	0.139
QQN-StrongWolfe	3.23e-1	1.79e-12	3.23e-1	3.23e-1	80.3	0.0	0.058
QQN-Bisection-1	3.23e-1	1.05e-12	3.23e-1	3.23e-1	110.7	0.0	0.071
QQN-CubicQuadraticInterpolation	3.23e-1	1.34e-12	3.23e-1	3.23e-1	105.4	0.0	0.071
L-BFGS	3.23e-1	2.14e-5	3.23e-1	3.23e-1	2311.4	0.0	1.246
L-BFGS-Conservative	3.23e-1	9.68e-11	3.23e-1	3.23e-1	545.5	0.0	0.317
L-BFGS-MoreThuente	3.23e-1	2.80e-4	3.23e-1	3.24e-1	86.2	0.0	0.049
L-BFGS-Limited	3.23e-1	8.38e-5	3.23e-1	3.24e-1	3146.0	0.0	1.606
GD-AdaptiveMomentum	3.23e-1	4.50e-9	3.23e-1	3.23e-1	479.1	0.0	0.478
GD-Momentum	3.23e-1	7.07e-7	3.23e-1	3.23e-1	1668.0	0.0	1.648
GD-Nesterov	3.23e-1	6.77e-7	3.23e-1	3.23e-1	1668.0	0.0	1.649
L-BFGS-Aggressive	3.25e-1	7.06e-4	3.23e-1	3.26e-1	3432.2	0.0	1.395
Adam-Fast	3.24e-1	2.14e-4	3.24e-1	3.25e-1	77.0	0.0	0.050
Adam-WeightDecay	3.27e-1	8.69e-4	3.25e-1	3.29e-1	2502.0	0.0	1.623
GD-WeightDecay	3.39e-1	4.45e-4	3.38e-1	3.40e-1	1668.0	0.0	1.650
Adam	3.92e-1	9.22e-3	3.75e-1	4.09e-1	2502.0	0.0	1.611
Adam-AMSGrad	3.95e-1	5.85e-3	3.84e-1	4.09e-1	2502.0	0.0	1.619
GD	3.97e-1	3.28e-3	3.93e-1	4.05e-1	1668.0	0.0	1.635
Adam-Robust	4.12e-1	8.61e-3	3.96e-1	4.28e-1	2502.0	0.0	1.621
Trust Region-Conservative	4.44e-1	2.76e-3	4.39e-1	4.49e-1	82.4	0.0	0.044
Trust Region-Standard	7.01e-1	2.90e-2	6.45e-1	7.53e-1	5.0	0.0	0.003
Trust Region-Adaptive	7.06e-1	2.50e-2	6.56e-1	7.48e-1	5.0	0.0	0.003
Trust Region-Precise	7.01e-1	2.67e-2	6.59e-1	7.56e-1	5.0	0.0	0.003
Trust Region-Aggressive	7.03e-1	2.08e-2	6.65e-1	7.53e-1	5.0	0.0	0.003