STA378 Documentations

Felix Gao

September 2025

1 Variables Descriptions

Data Table Columns

Column	Type	Description
status	Symbol	Outcome of the solver run (e.g., first_order, max_time,
		unbounded).
name	String	Identifier for the optimization problem.
solver	String	Name of the solver/algorithm applied.
mem	Int	Hyperparameter of the solver.
nvar	Int	Number of decision variables in the problem.
time	Float64	Total runtime in seconds (s).
memory	Float64	Total memory in megabytes (MB).
num_iter	Int	Total number of iterations performed.
nvmops	Int	Number of vector/matrix operations executed.
neval_obj	Int	Number of objective function evaluations.
init_eval_obj_time	Float64	Time (seconds) for the initial objective evaluation.
neval_grad	Int	Number of gradient evaluations.
init_eval_grad_time	Float64	Time (seconds) for the initial gradient evaluation.

Table 1: Description of columns in the solver benchmark data table.