SOGA: Inference of Probabilistic Programs by Second-order Gaussian Approximation Reproducibility Report

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Table 2: Evaluation of *SOGA* accuracy and runtime as variables increase by using PyMC as ground truth due to PSI timing out. Each row shows the model's number of variables (# vars), absolute percentage errors ($|\%e|$), and *SOGA* runtime.

	SOGA		*PyMC*		
Model	*time (s)*	*value*	*time (s)*	*value*	$\|\%e\|$
$timeseries_5$	0.071	0.998	291.620	0.991	0.702
$timeseries_6$	0.048	2.048	244.245	2.052	0.190
$timeseries_7$	0.055	1.999	502.801	2.021	1.103
$timeseries_8$	0.057	2.361	591.489	2.368	0.288
$timeseries_9$	0.059	2.879	to	-	-
$timeseries_{15}$	0.086	5.347	to	-	-
$timeseries_{25}$	0.089	6.185	to	-	-
$timeseries_{45}$	0.233	6.575	to	-	-
$timeseries_{65}$	0.336	6.622	to	-	-
$timeseries_{85}$	0.523	6.628	to	-	-
$timeseries_{100}$	0.427	6.628	to	-	-