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*	$\|\%e\|$
$timeseries_5$	0.047	0.998	325.746	0.992	0.583
$timeseries_6$	0.051	2.048	280.048	2.057	0.431
$timeseries_7$	0.054	1.999	579.741	1.991	0.398
$timeseries_8$	0.057	2.361	to	-	-
$timeseries_9$	0.060	2.879	to	-	-
$timeseries_{15}$	0.071	5.347	to	-	-
$timeseries_{25}$	0.096	6.185	to	-	-
$timeseries_{45}$	0.145	6.575	to	-	-
$timeseries_{65}$	0.207	6.622	to	-	-
$timeseries_{85}$	0.257	6.628	to	-	-
$timeseries_{100}$	0.465	6.628	to	-	-