Package 'SHINYstan'

Contents

Type Package

Title Dynamic Documents for R

Version 0.0.2

Date 2014-11-05

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Description R-package based on Shiny helps facilitate bayesian data analysis visualization (especially for RStan users).

Depends R (>= 3.0)

Imports tools, utils, knitr (>= 1.6), yaml (>= 2.1.5), htmltools (>= 0.2.4), caTools Suggests shiny (>= 0.10.1), testthat, digest

SystemRequirements pandoc (>= 1.12.3) -http://johnmacfarlane.net/pandoc URL http://rmarkdown.rstudio.com

License GPL-3

NeedsCompilation no

Repository CRAN

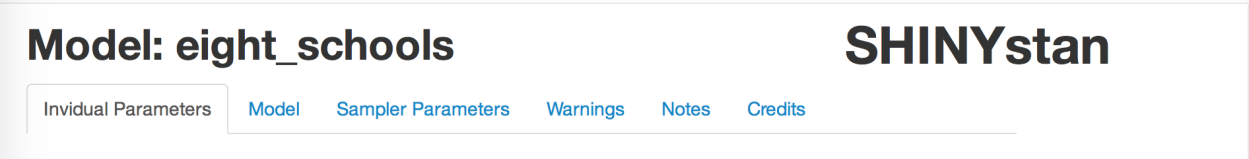
Date/Publication 2014-11-05 18:12:29

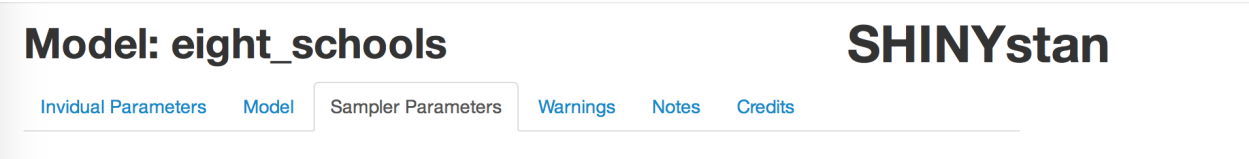
1.Using the SHINYstan package

How to get started

```
library("devtools")
install_github("jgabry/SHINYstan")
library("SHINYstan")
#launch a demo
launch_SHINYstan_demo()
```

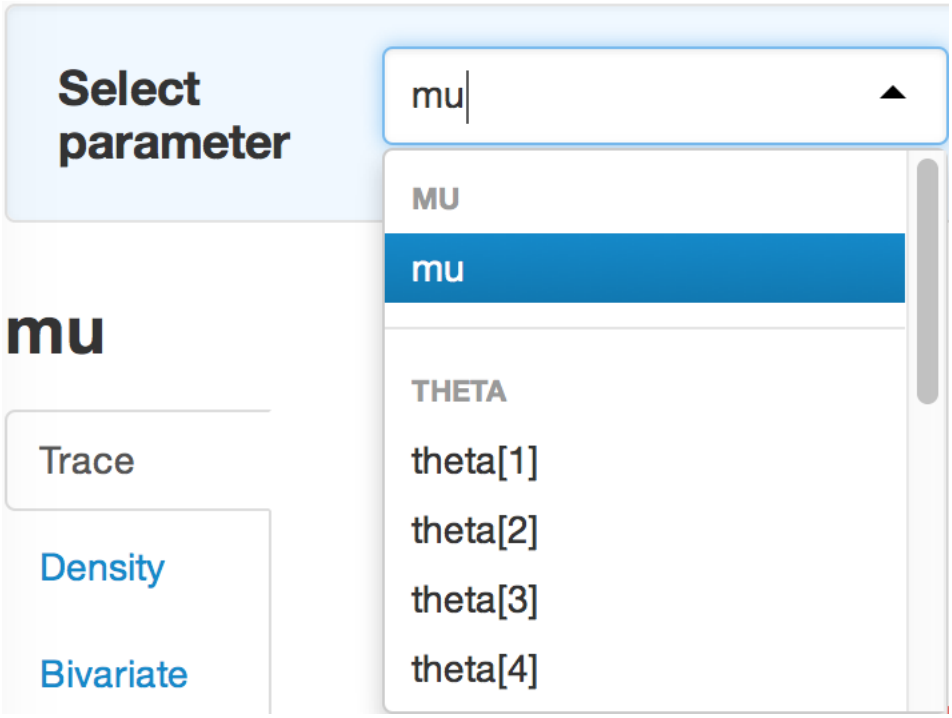
"Individual Parameters", "Model", "Sampler Paramters", "Warnings", "Notes", "Credits": use the tabs to switch

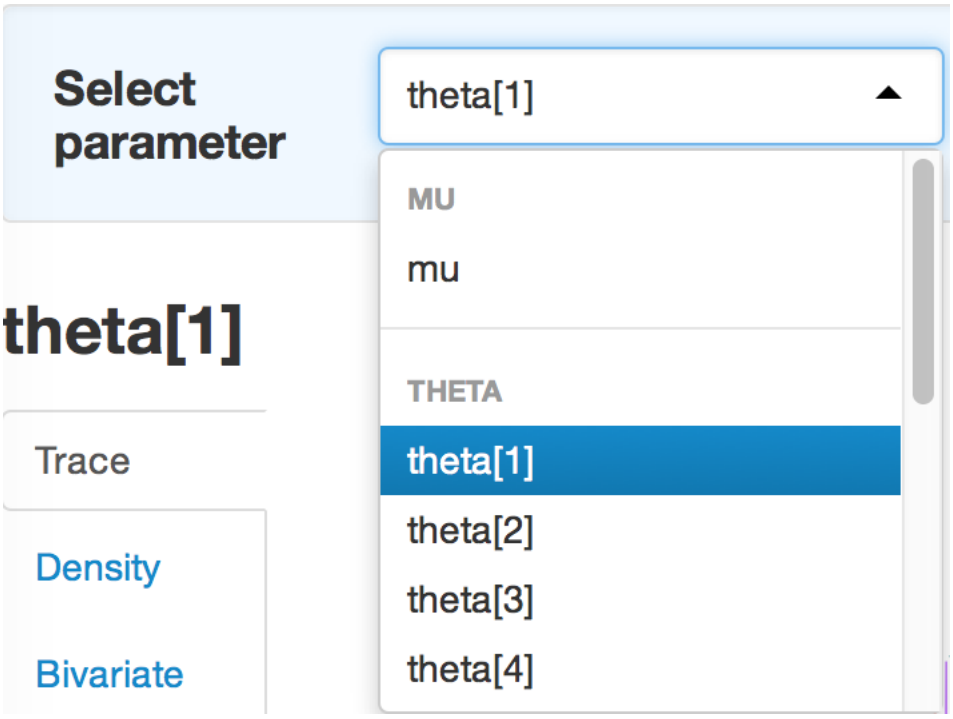




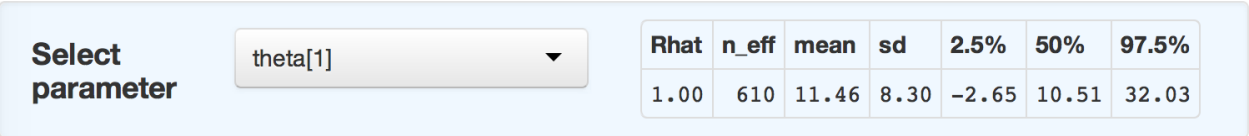
Individual Parameters

Select parameters through widgets

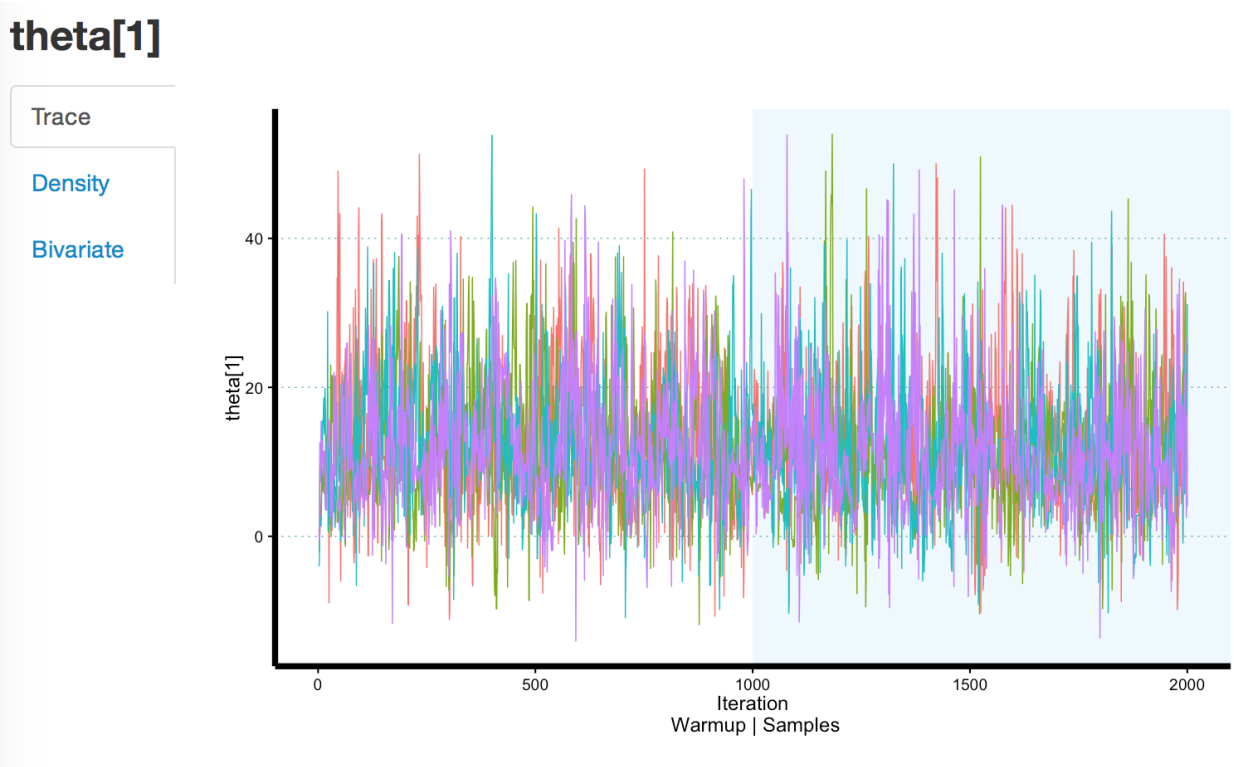


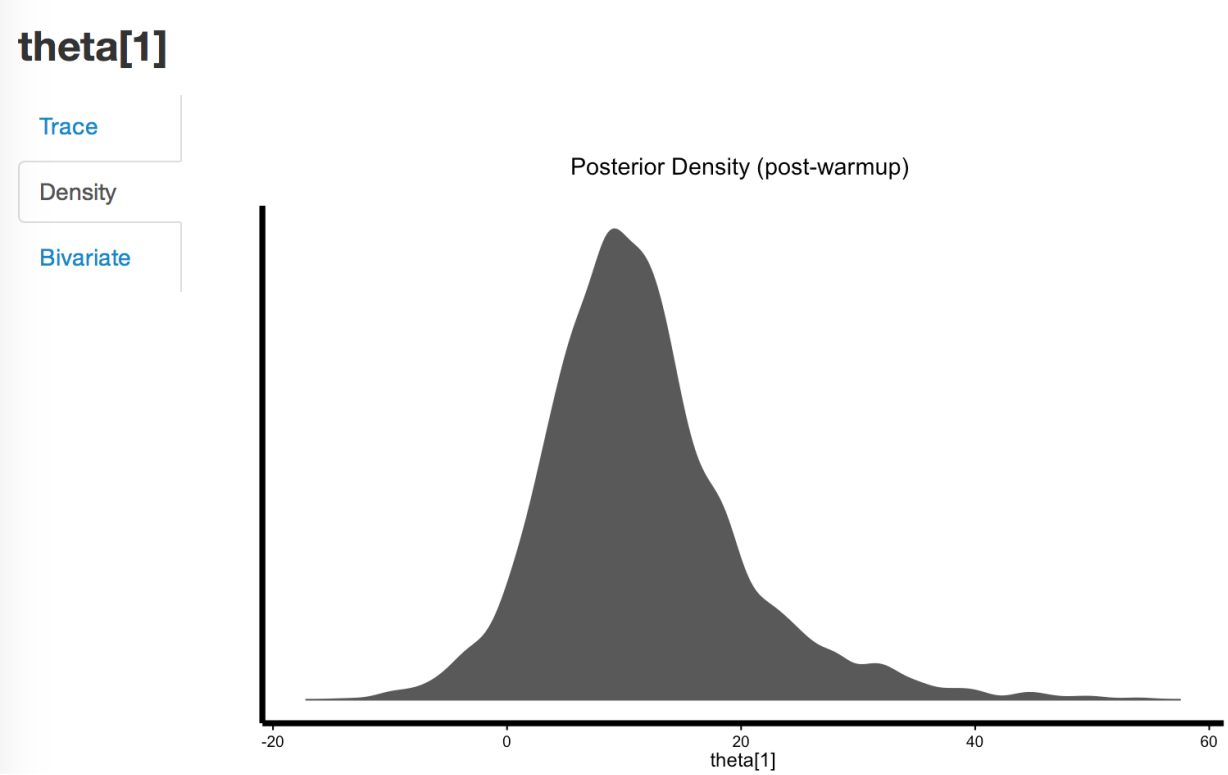


Check Rhat n_eff mean sd 2.5% 50% 97.5% CI from the table

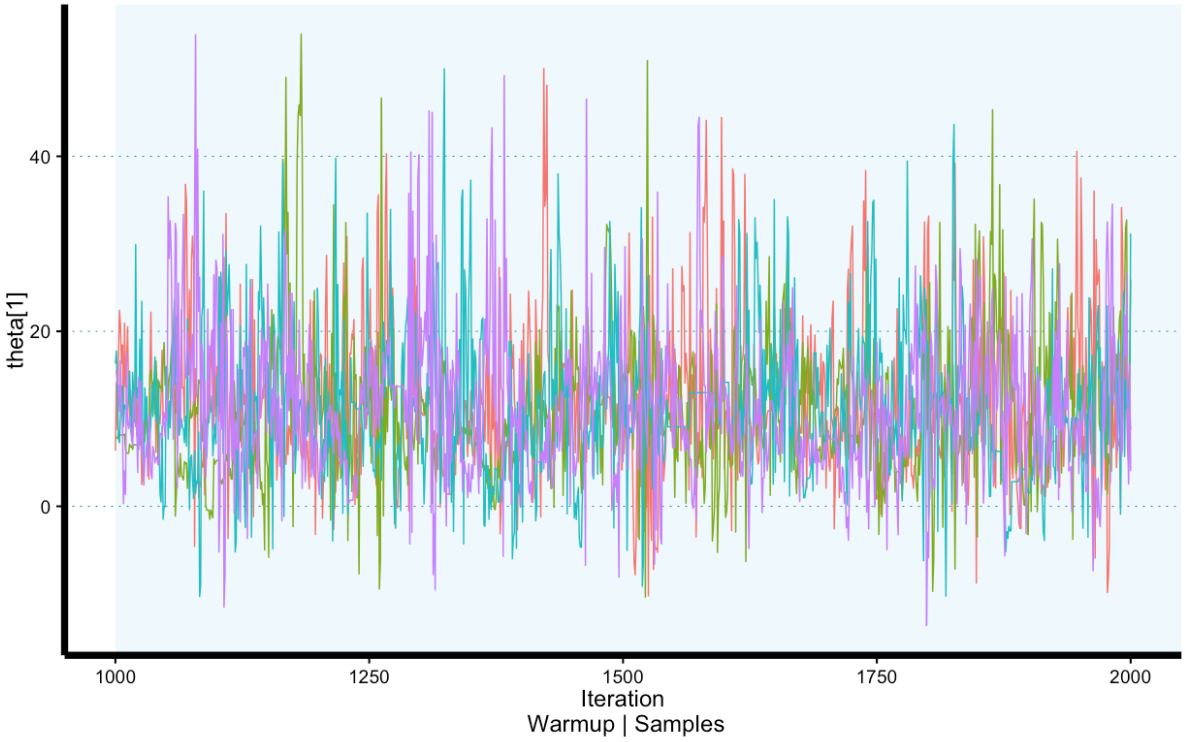


Check Trace, Density, Bivariate Plots by clicking those tabs

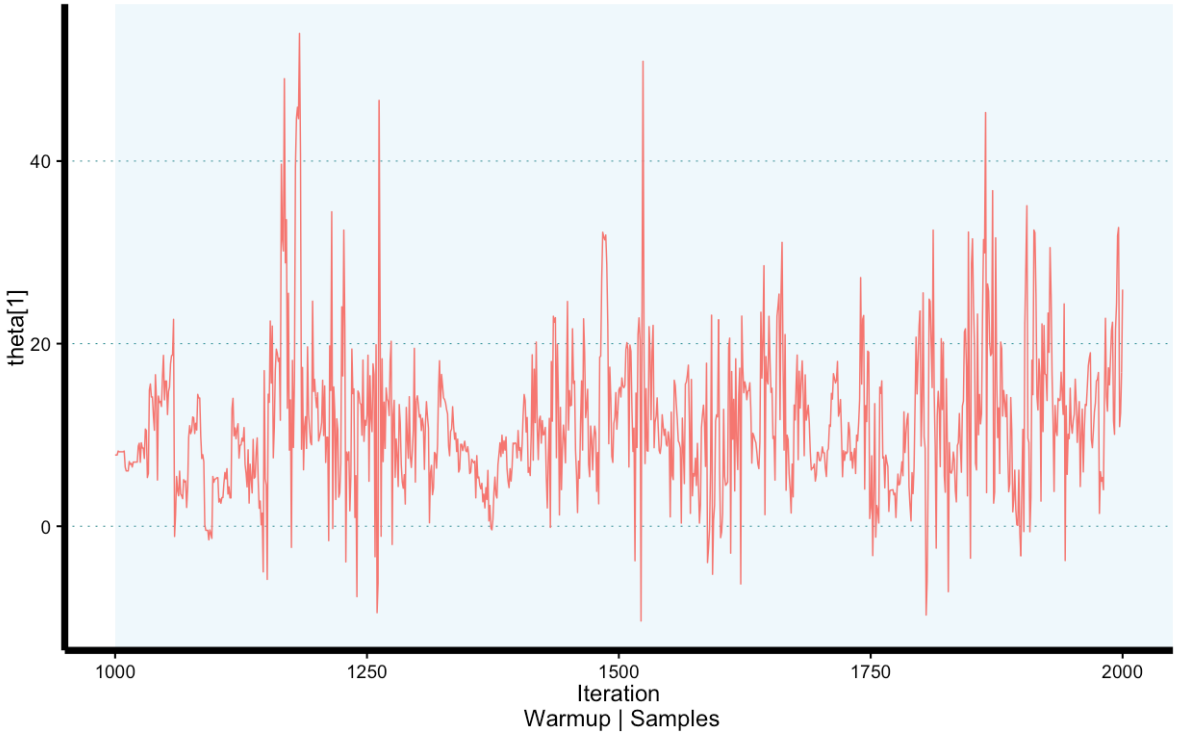



theta[1]
Trace
Density
Bivariate
Posterior Density (post-warmup)
-20
0
20
40
60
theta[1]

Below Trace Plot, there you can adjust number of chains, whether include warmup or not, even customize appearance



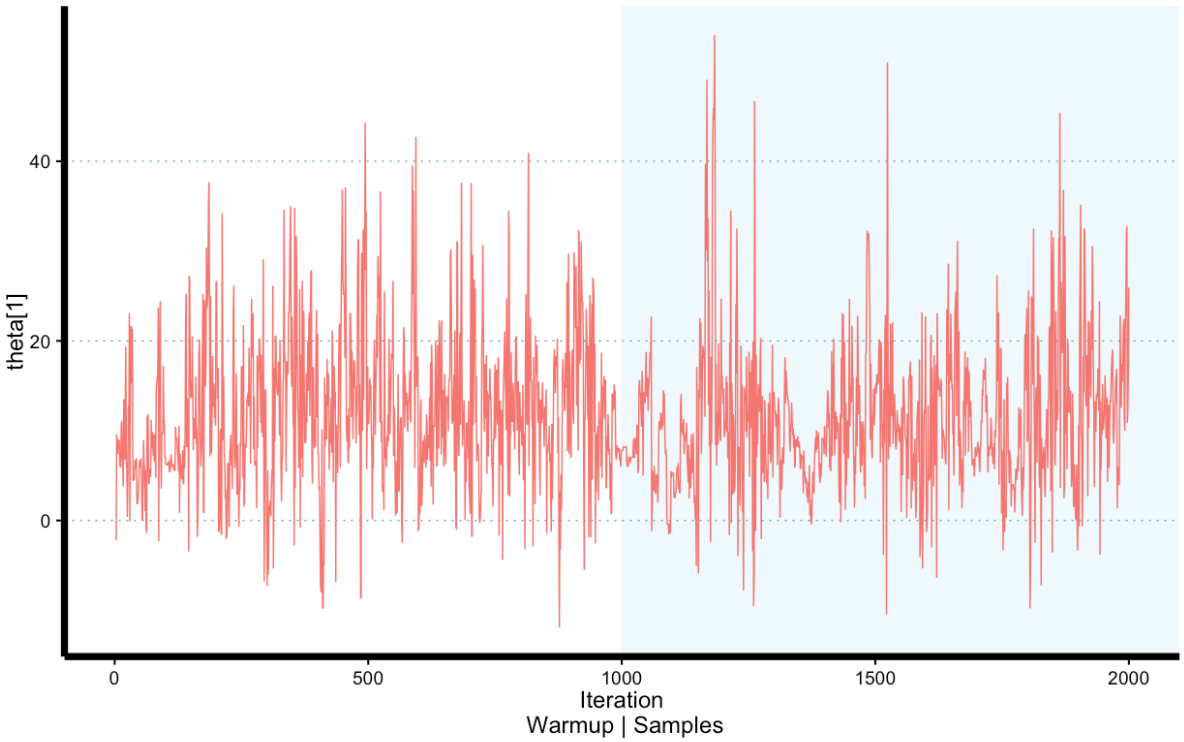
0 **Chain (0 = all chains)** **Include warmup** **Customize appearance**



2 Chain (0 = all chains)

Include warmup

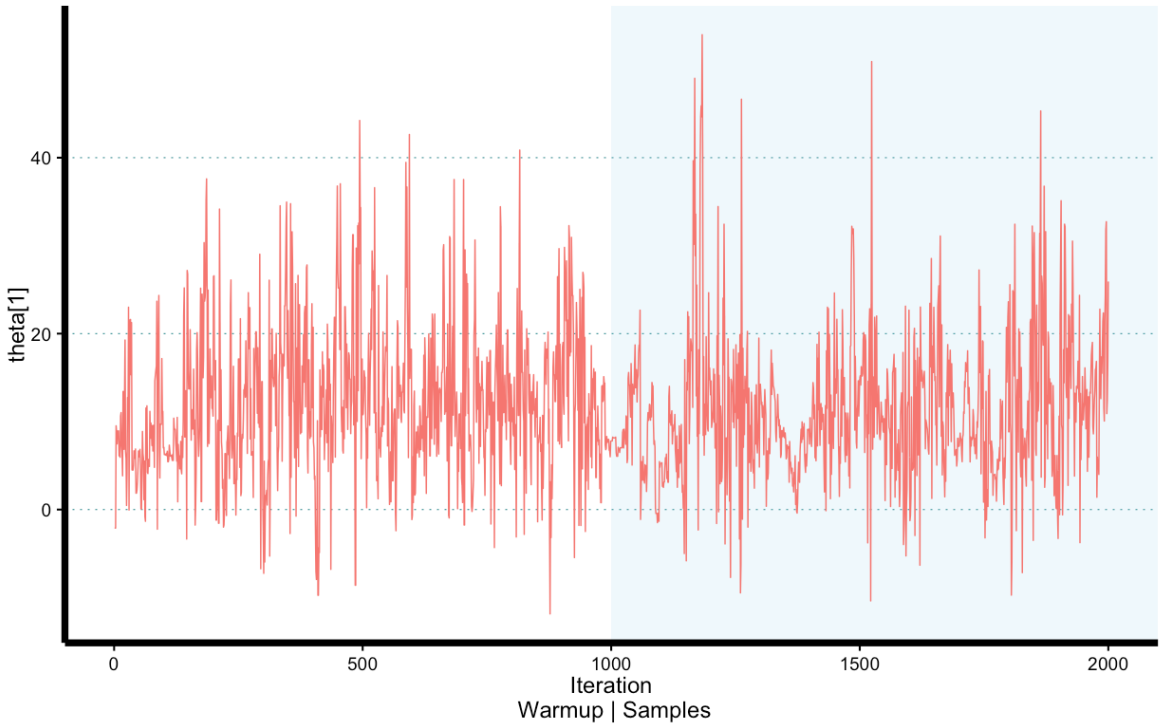
Customize appearance



2 Chain (0 = all chains)

Include warmup

Customize appearance



2 **Chain (0 = all chains)**

Include warmup

Customize appearance

Color palette

- ✓ Default
- Brewer (spectral)
- Rainbow
- Gray

Shading

Samples

Shading color

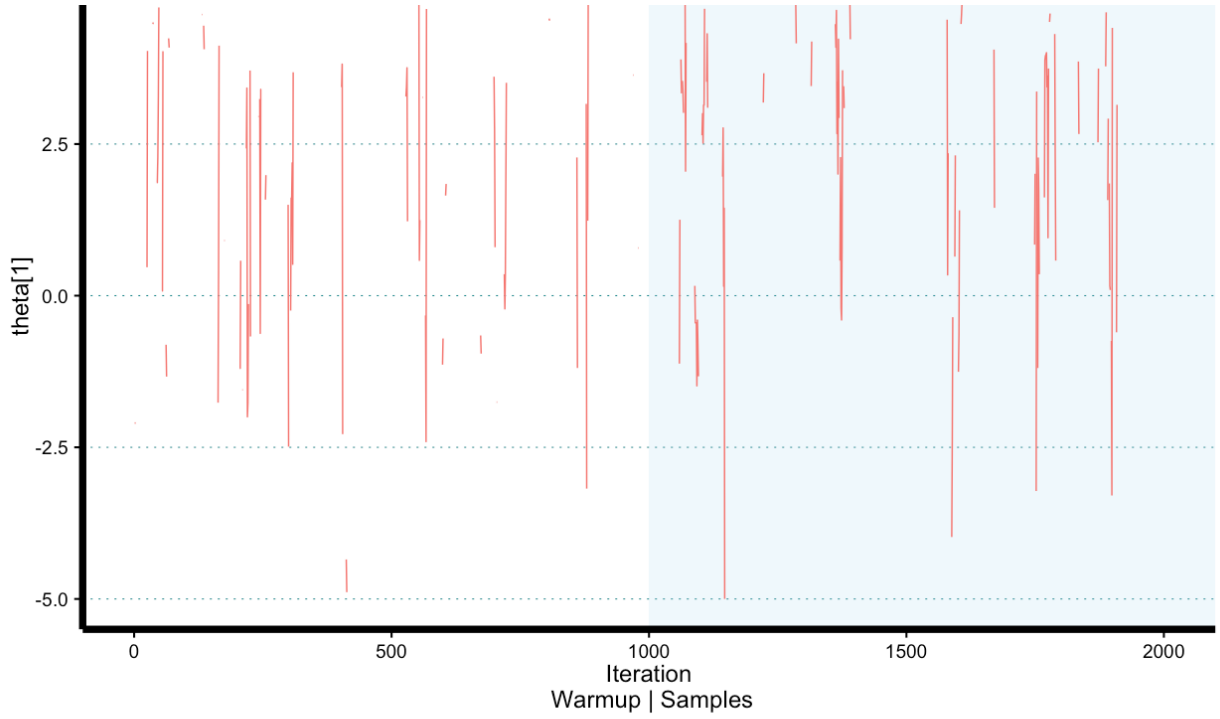
skyblue

Shading opacity

0.15

TraceZoom

TraceZoom allows you to interactively control the range of iterations and values displayed in the trace plot.



2 Chain (0 = all chains)

Include warmup

Customize appearance

Color palette: Default

Shading: Samples

Shading color: skyblue

Shading opacity: 0.15

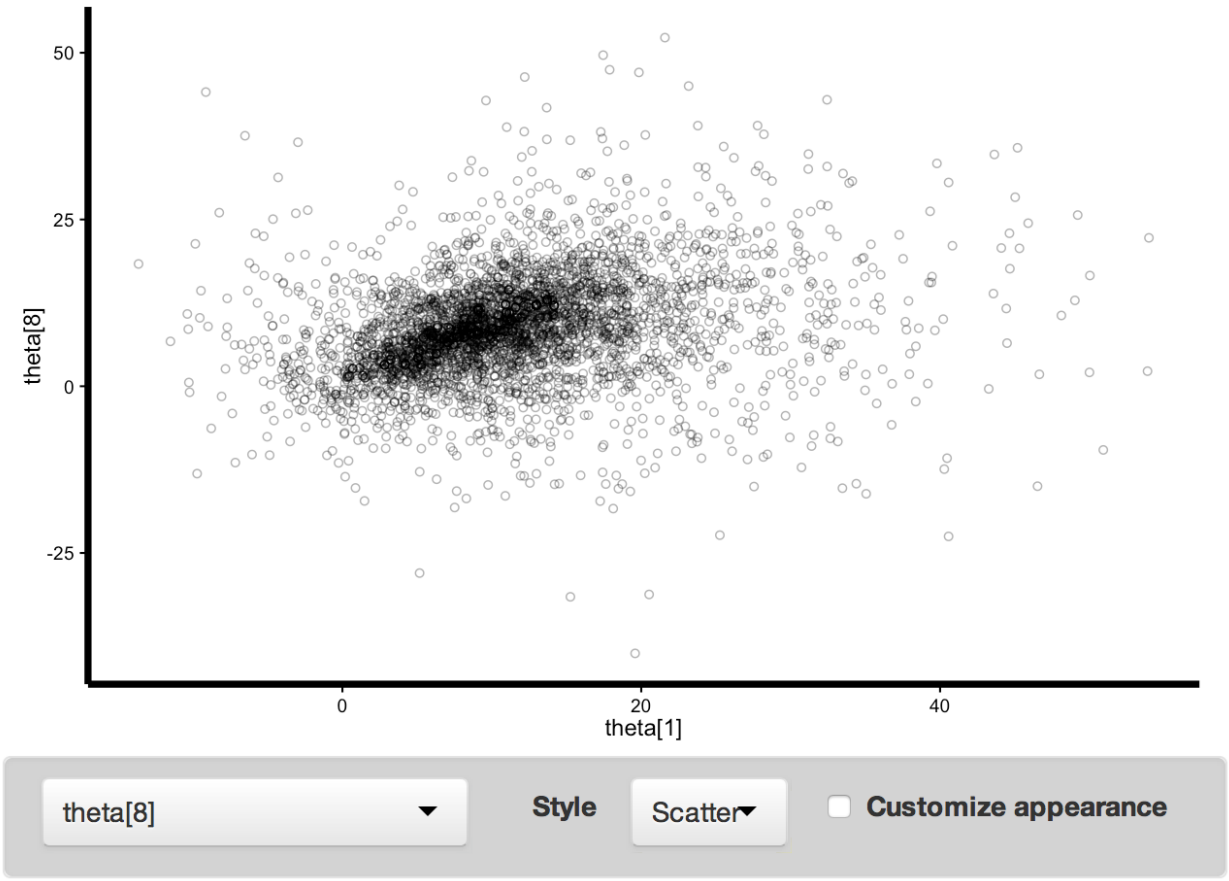
Enable TraceZoom

TraceZoom allows you to interactively control the range of iterations and values displayed in the trace plot.

Iterations: 0 – 2,000 2,000

Value: −5 – 5 25

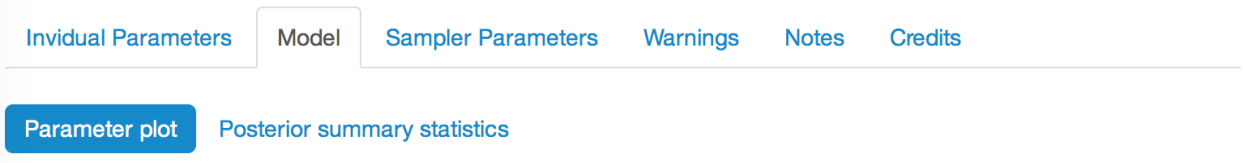
Bivariate plot: select your y axis and style of plot



At bottom of plot, you have the option to save ggplot2 object(.RData)

Model

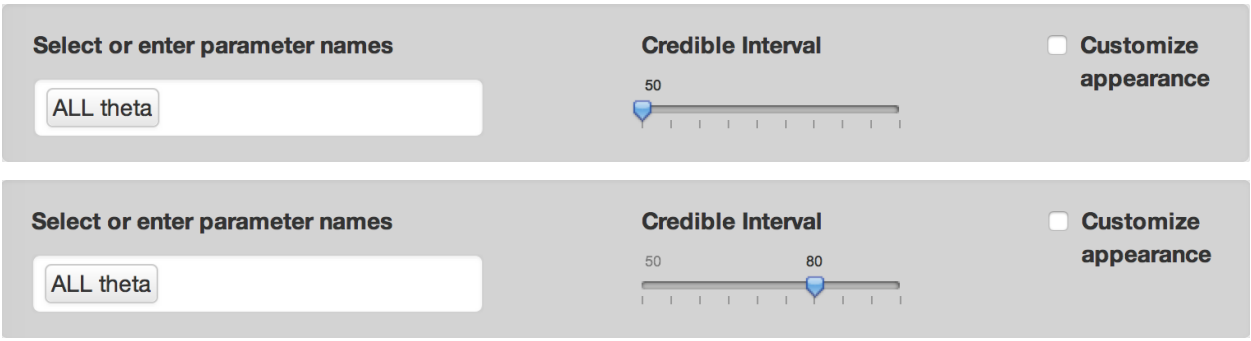
Parameter Plot and Posterior summary statistics



Parameter Plot

Select or enter parameter names(can select all:ALL theta)

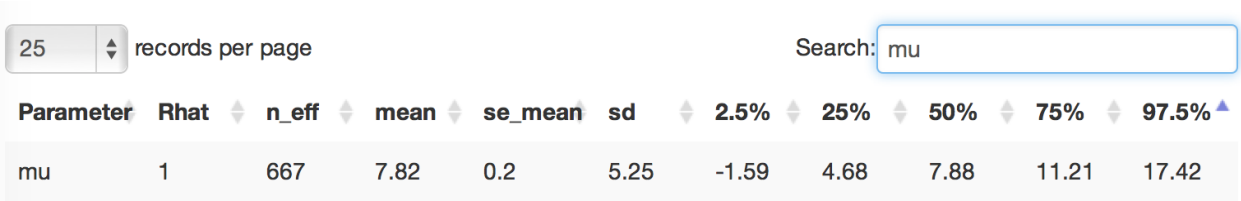
Adjust Credible interval



Posterior summary statistics

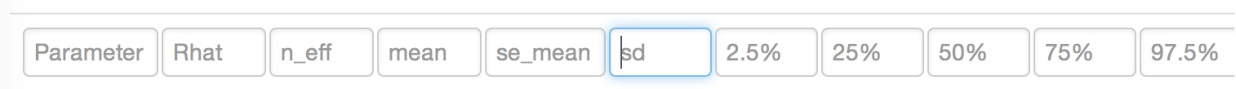
Adjust how many parameters displaied per page

Search any parameter



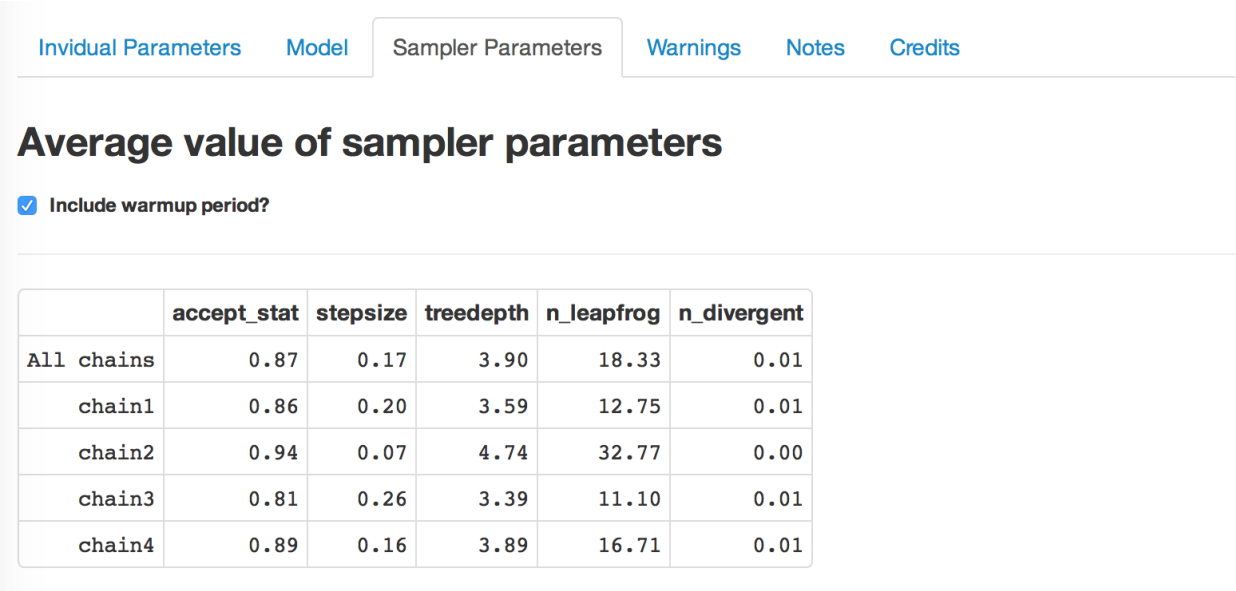
Sort by ascending or descending order

Search any record by type in



Sampler Parameters

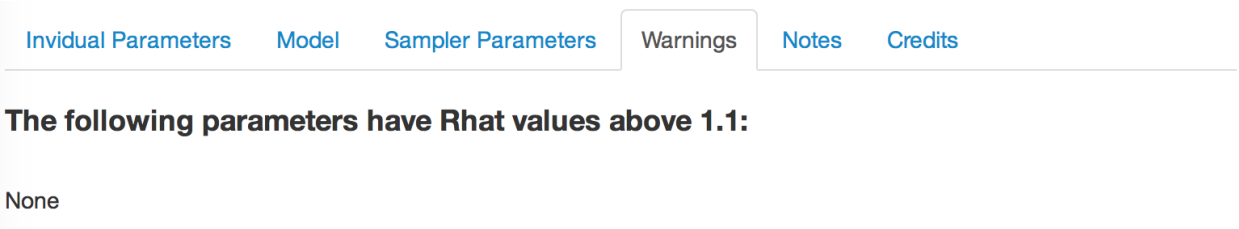
Include warmup period or not



	accept_stat	stepsize	treedepth	n_leapfrog	n_divergent
All chains	0.87	0.17	3.90	18.33	0.01
chain1	0.86	0.20	3.59	12.75	0.01
chain2	0.94	0.07	4.74	32.77	0.00
chain3	0.81	0.26	3.39	11.10	0.01
chain4	0.89	0.16	3.89	16.71	0.01

Warnings

Take a quick look at warnings



Notes

Leave notes and save changes