

Package ‘SHINYstan’

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Type Package

Title Dynamic Documents for R

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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 ($\geq 2.1.5$), htmltools ($\geq 0.2.4$), caTools Suggests shiny ($\geq 0.10.1$), testthat, digest

SystemRequirements pandoc ($\geq 1.12.3$) -<http://johnmacfarlane.net/pandoc> URL <http://rmarkdown.rstudio.com>

License GPL-3

NeedsCompilation no

Repository CRAN

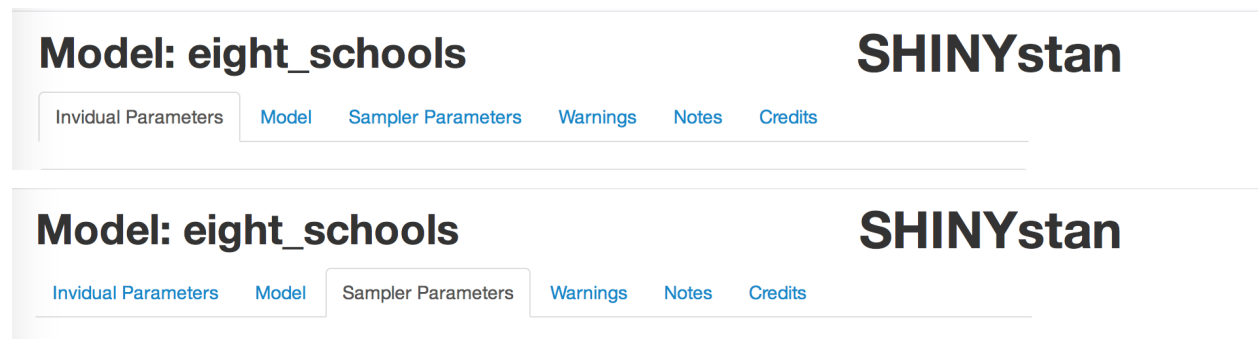
Date/Publication 2014-11-05 18:12:29

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

Select parameter

mu

MU

mu

THETA

theta[1]

theta[2]

theta[3]

theta[4]

mu

Trace

Density

Bivariate

Select parameter

theta[1]

MU

mu

THETA

theta[1]

theta[2]

theta[3]

theta[4]

theta[1]

Trace

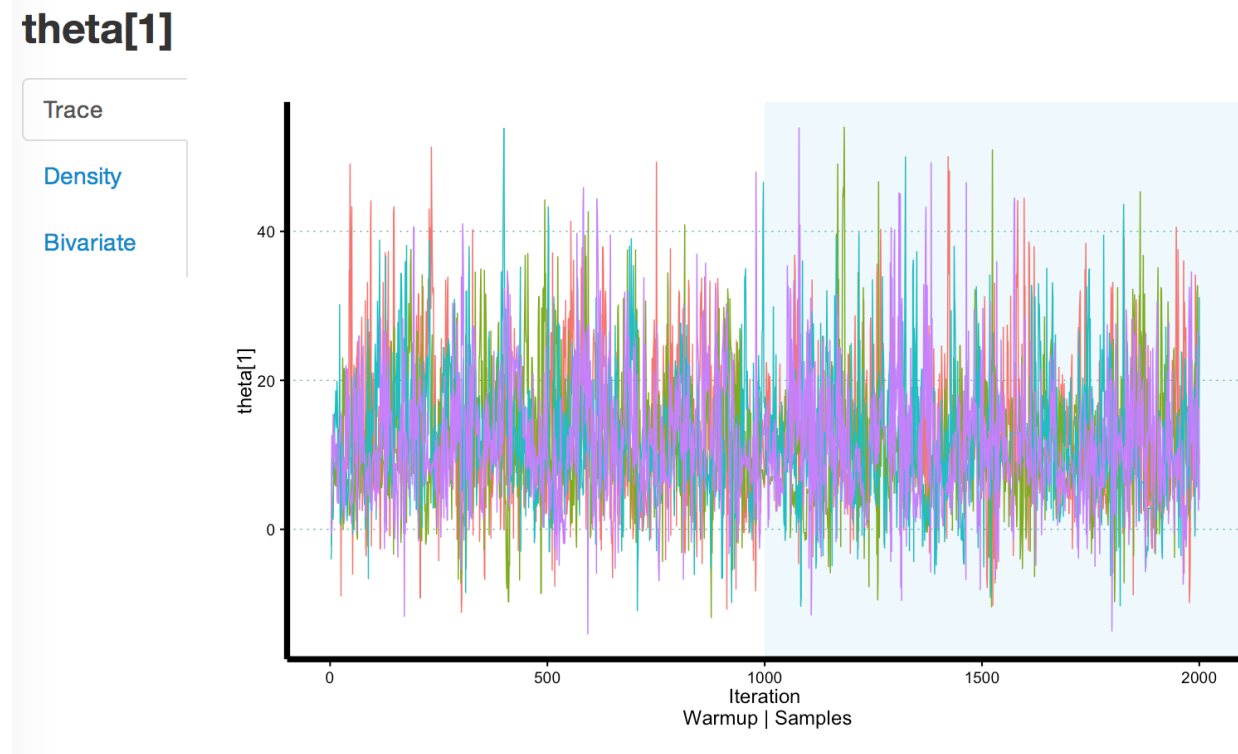
Density

Bivariate

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

Select parameter	theta[1]	Rhat	n_eff	mean	sd	2.5%	50%	97.5%
		1.00	610	11.46	8.30	-2.65	10.51	32.03

Check Trace, Density, Bivariate Plots by clicking those tabs

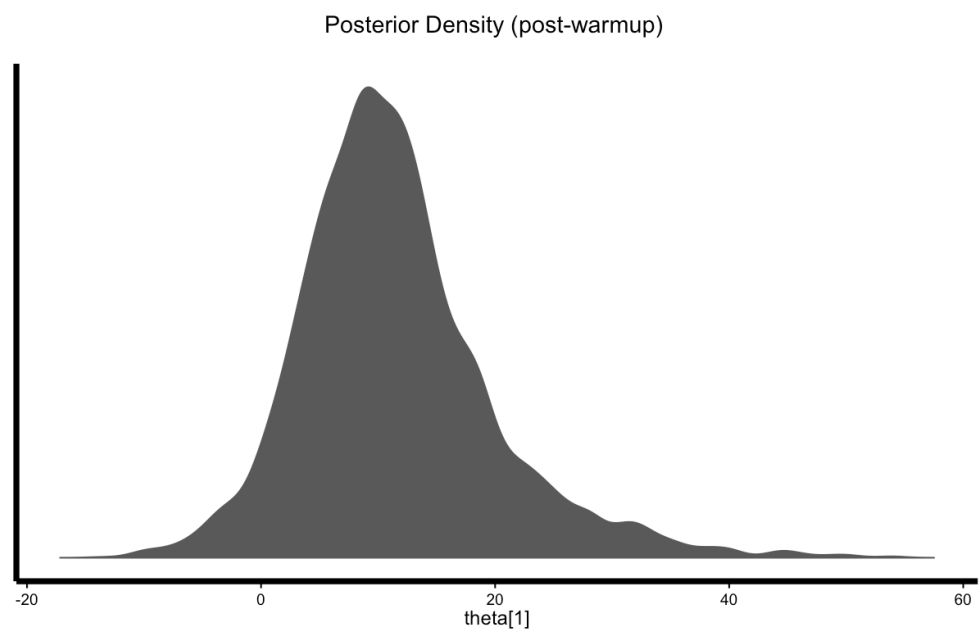


theta[1]

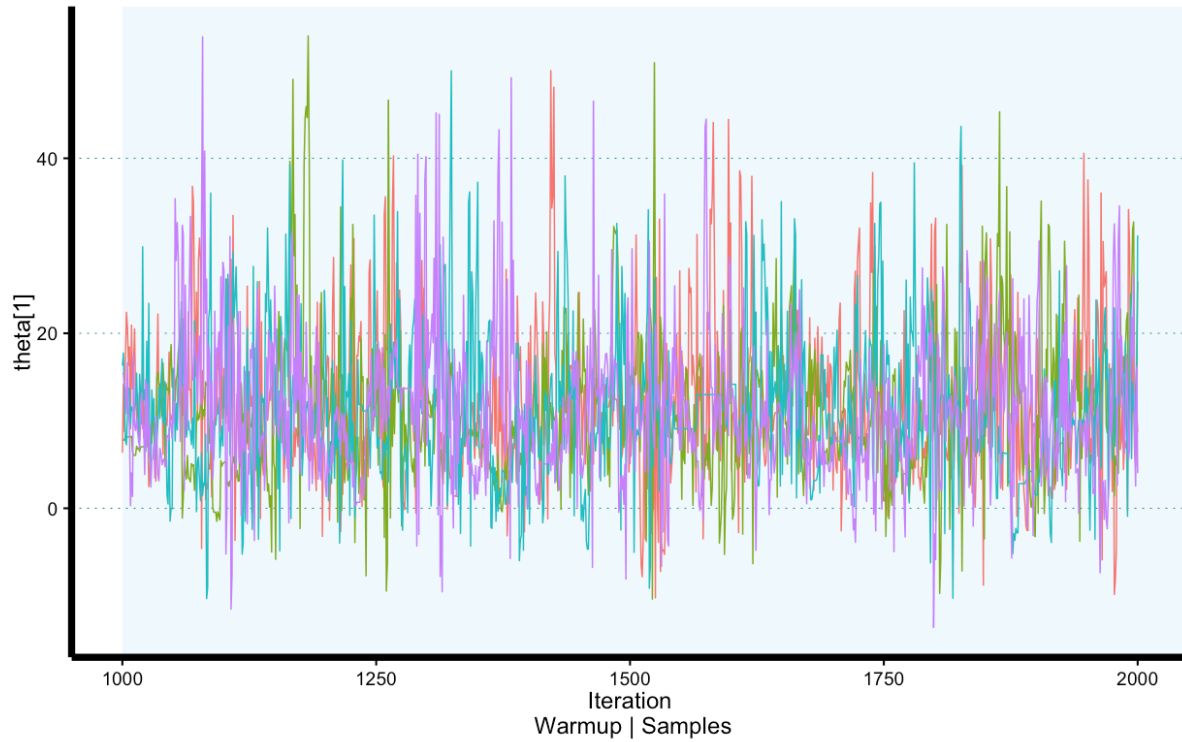
Trace

Density

Bivariate



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



0

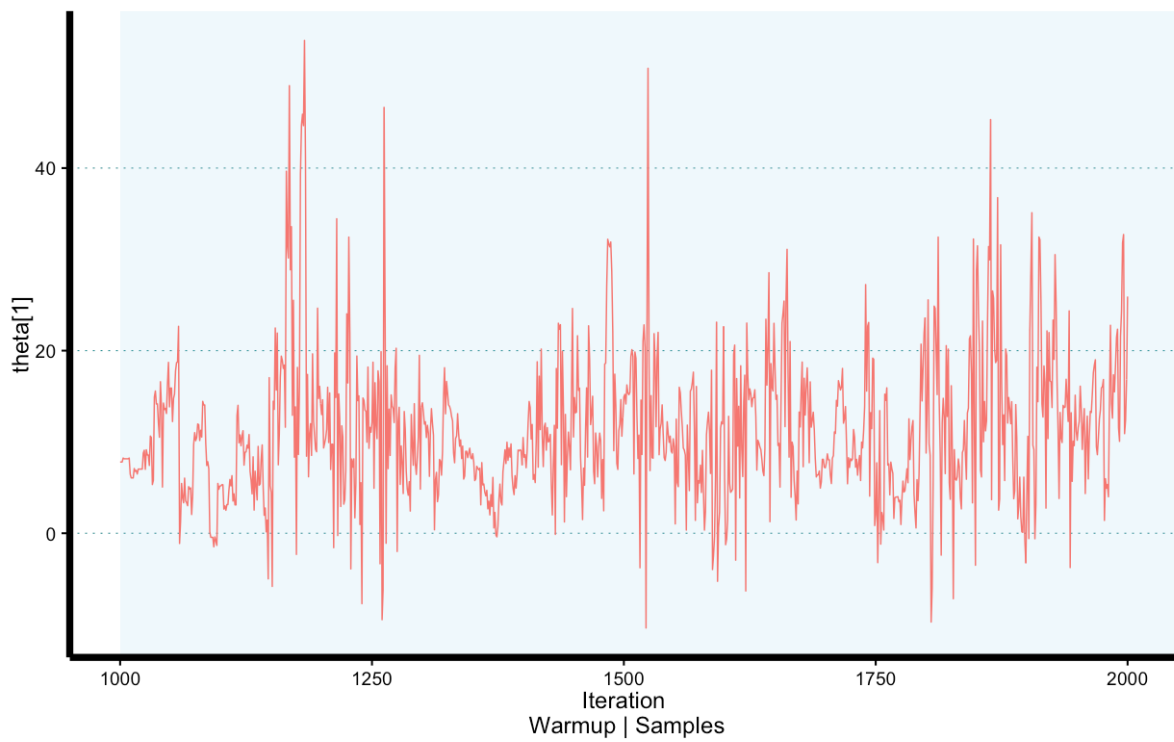
Chain (0 = all chains)

☐

Include warmup

☐

Customize appearance



2



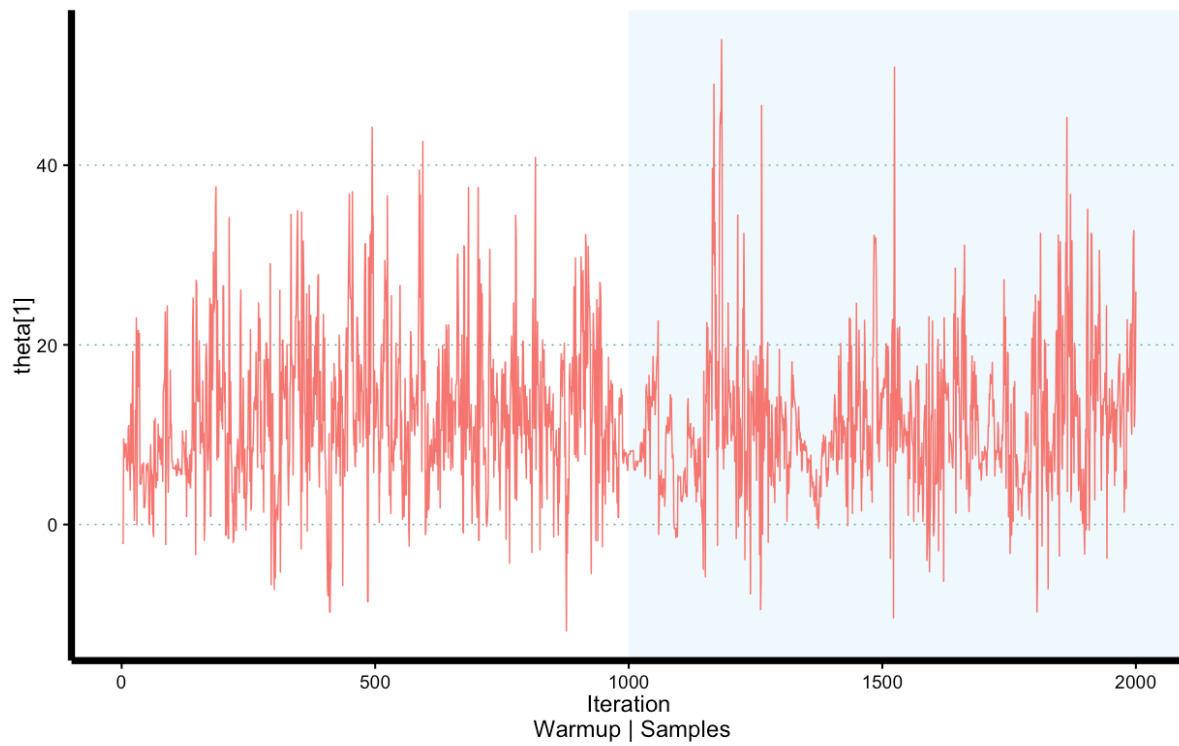
Chain (0 = all chains)



Include warmup



Customize appearance



2



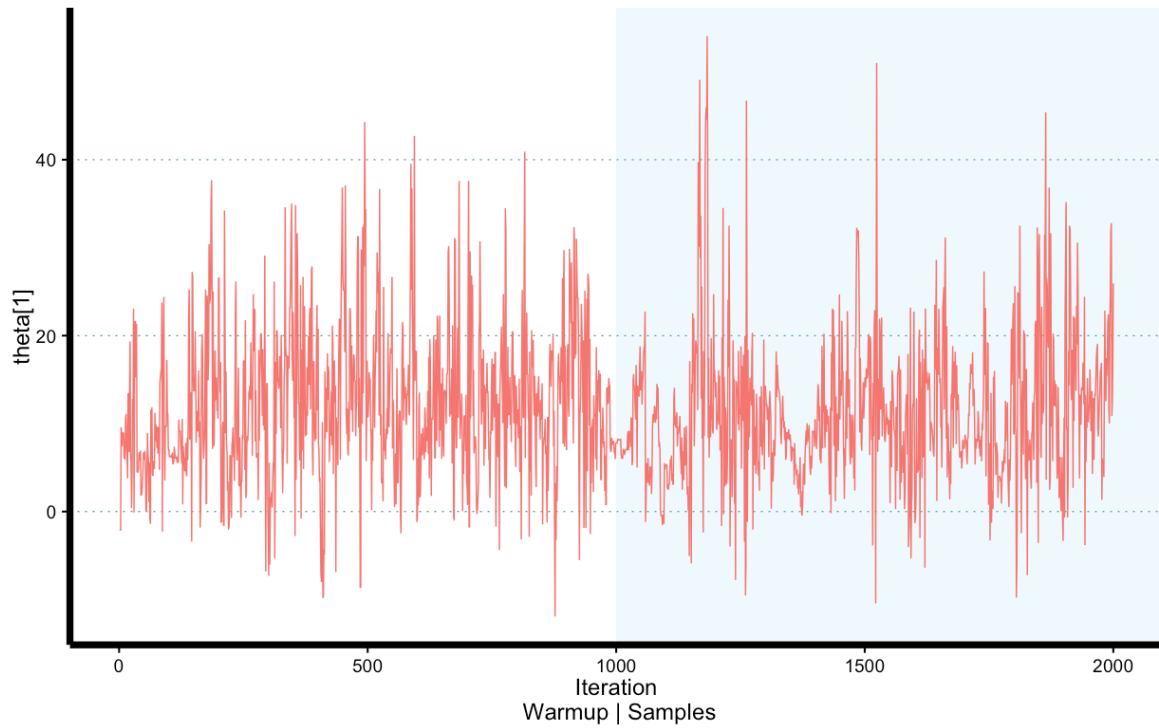
Chain (0 = all chains)



Include warmup



Customize appearance



2
Chain (0 = all chains)
☒ Include warmup
☒ Customize appearance

Color palette

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

Shading

Samples

Shading color

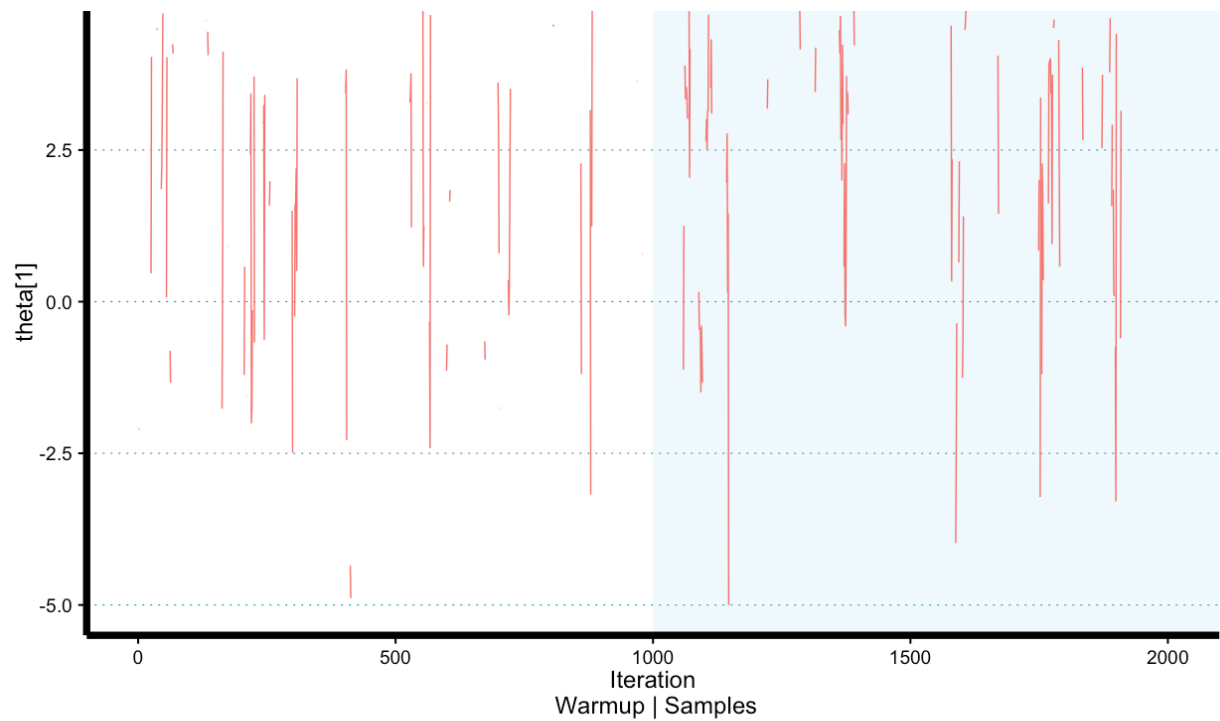
skyblue

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

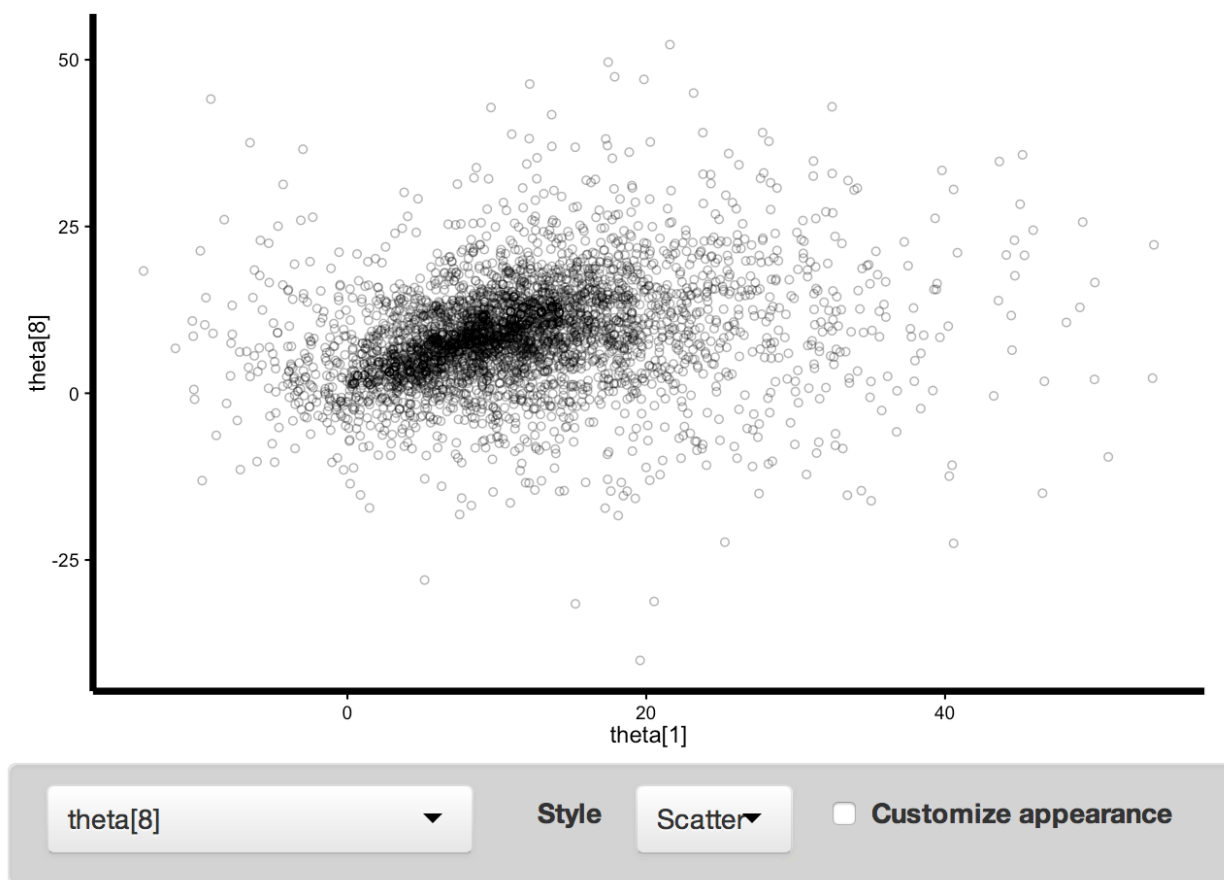
2,000

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

[Individual Parameters](#) [Model](#) [Sampler Parameters](#) [Warnings](#) [Notes](#) [Credits](#)

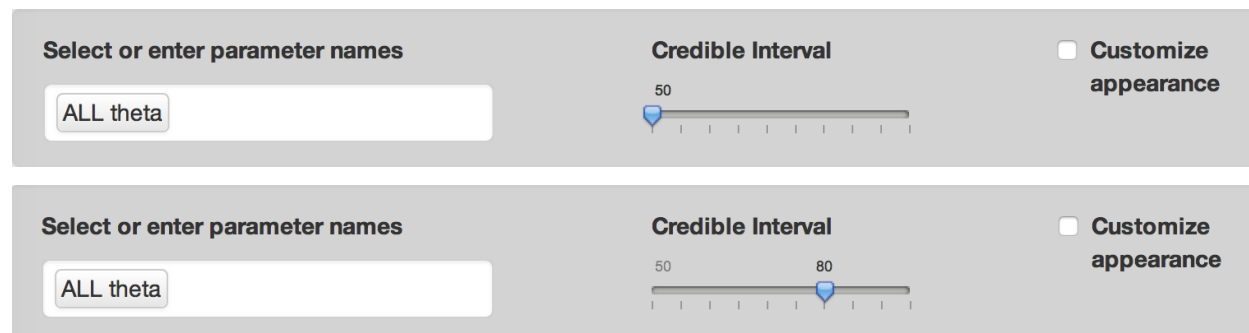
[Parameter plot](#) [Posterior summary statistics](#)

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

Parameter plot

Posterior summary statistics

10

✓ 25

50

100

 records per page

Search:

Parameter	Rhat	n_eff	mean	se_mean	sd	2.5%	25%	50%	75%	97.5%
-----------	------	-------	------	---------	----	------	-----	-----	-----	-------

Search any parameter

25

 records per page

Search: mu

Parameter	Rhat	n_eff	mean	se_mean	sd	2.5%	25%	50%	75%	97.5%
mu	1	667	7.82	0.2	5.25	-1.59	4.68	7.88	11.21	17.42

Sort by ascending or descending order

Parameter	Rhat	n_eff	mean	se_mean	sd	2.5%	25%	50%	75%	97.5%
-----------	------	-------	------	---------	----	------	-----	-----	-----	-------

Search any record by type in

Parameter

Rhat

n_eff

mean

se_mean

sd

2.5%

25%

50%

75%

97.5%

Sampler Parameters

Include warmup period or not

[Individual Parameters](#)

[Model](#)

[Sampler Parameters](#)

[Warnings](#)

[Notes](#)

[Credits](#)

Average value of sampler parameters

☒ Include warmup period?

	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

[Individual Parameters](#)

[Model](#)

[Sampler Parameters](#)

[Warnings](#)

[Notes](#)

[Credits](#)

The following parameters have Rhat values above 1.1:

None

Notes

Leave notes and save changes

[Individual Parameters](#)

[Model](#)

[Sampler Parameters](#)

[Warnings](#)

[Notes](#)

[Credits](#)

Use this space to store notes about your model. The text will be saved in the `user_model_info` slot of the `shiny_stan_object` and displayed here each time SHINYstan is launched with this `shiny_stan_object`.

Save Changes