Untitled

R Markdown test

```
# should run a model and show a plot
library(rstanarm)
```

```
## Loading required package: Rcpp
## rstanarm (Version 2.17.2, packaged: 2017-12-20 23:59:28 UTC)
## - Do not expect the default priors to remain the same in future rstanarm versions.
## Thus, R scripts should specify priors explicitly, even if they are just the defaults.
## - For execution on a local, multicore CPU with excess RAM we recommend calling
## options(mc.cores = parallel::detectCores())
## - Plotting theme set to bayesplot::theme_default().
```

```
m1 <- stan_lmer(Reaction~Days+(1|Subject), data=lme4::sleepstudy)
```

```
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 1).
##
## Gradient evaluation took 0 seconds
## 1000 transitions using 10 leapfrog steps per transition would take 0 seconds.
## Adjust your expectations accordingly!
##
##
## Iteration:    1 / 2000 [  0%]  (Warmup)
## Iteration:  200 / 2000 [ 10%]  (Warmup)
## Iteration:  400 / 2000 [ 20%]  (Warmup)
## Iteration:  600 / 2000 [ 30%]  (Warmup)
## Iteration:  800 / 2000 [ 40%]  (Warmup)
## Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Iteration: 2000 / 2000 [100%]  (Sampling)
##
##  Elapsed Time: 1.057 seconds (Warm-up)
##                0.456 seconds (Sampling)
##                1.513 seconds (Total)
##
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 2).
##
## Gradient evaluation took 0 seconds
## 1000 transitions using 10 leapfrog steps per transition would take 0 seconds.
## Adjust your expectations accordingly!
##
##
```

```
## Iteration:    1 / 2000 [  0%]  (Warmup)
## Iteration:  200 / 2000 [ 10%]  (Warmup)
## Iteration:  400 / 2000 [ 20%]  (Warmup)
## Iteration:  600 / 2000 [ 30%]  (Warmup)
## Iteration:  800 / 2000 [ 40%]  (Warmup)
## Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Iteration: 2000 / 2000 [100%]  (Sampling)
##
##  Elapsed Time: 1.151 seconds (Warm-up)
##                0.414 seconds (Sampling)
##                1.565 seconds (Total)
##
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 3).
##
## Gradient evaluation took 0 seconds
## 1000 transitions using 10 leapfrog steps per transition would take 0 seconds.
## Adjust your expectations accordingly!
##
##
## Iteration:    1 / 2000 [  0%]  (Warmup)
## Iteration:  200 / 2000 [ 10%]  (Warmup)
## Iteration:  400 / 2000 [ 20%]  (Warmup)
## Iteration:  600 / 2000 [ 30%]  (Warmup)
## Iteration:  800 / 2000 [ 40%]  (Warmup)
## Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Iteration: 2000 / 2000 [100%]  (Sampling)
##
##  Elapsed Time: 0.992 seconds (Warm-up)
##                0.465 seconds (Sampling)
##                1.457 seconds (Total)
##
##
## SAMPLING FOR MODEL 'continuous' NOW (CHAIN 4).
##
## Gradient evaluation took 0 seconds
## 1000 transitions using 10 leapfrog steps per transition would take 0 seconds.
## Adjust your expectations accordingly!
##
##
## Iteration:    1 / 2000 [  0%]  (Warmup)
## Iteration:  200 / 2000 [ 10%]  (Warmup)
## Iteration:  400 / 2000 [ 20%]  (Warmup)
## Iteration:  600 / 2000 [ 30%]  (Warmup)
```

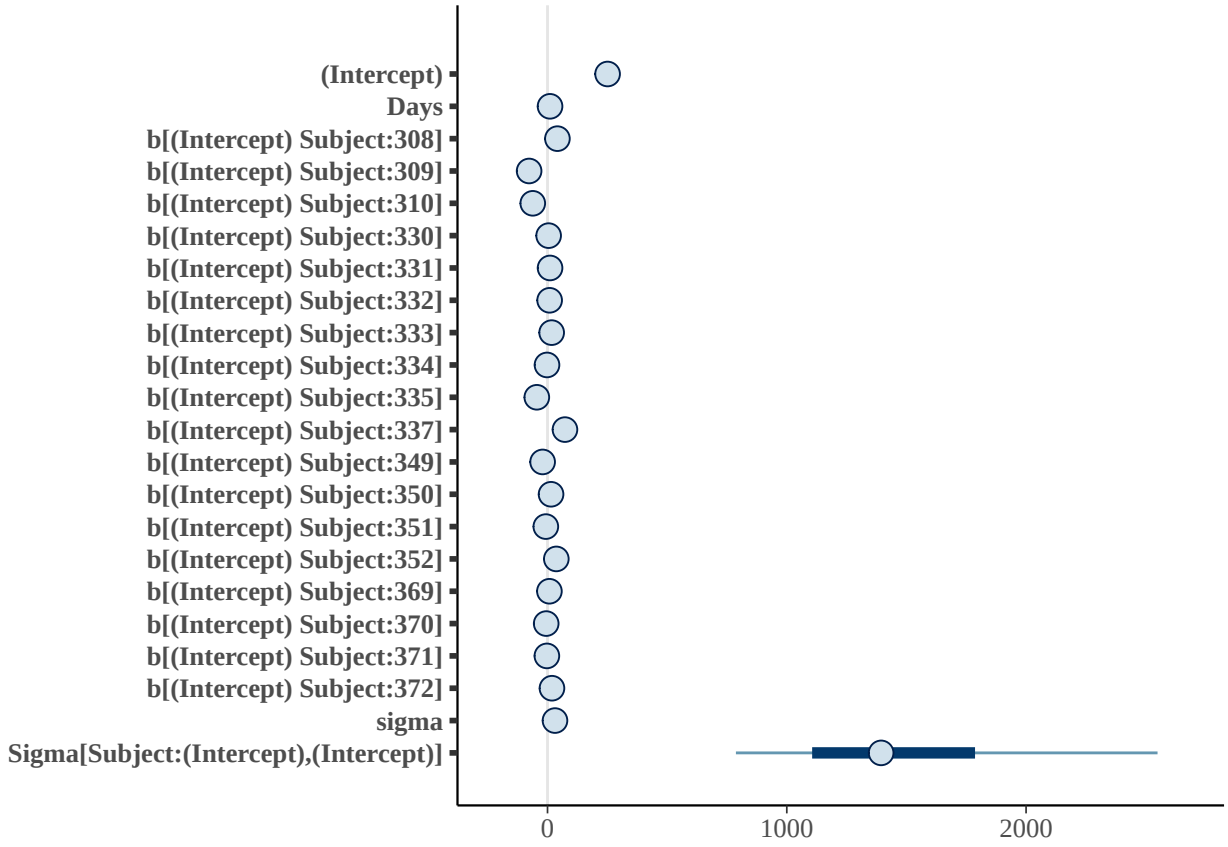
```
## Iteration:  800 / 2000 [ 40%]  (Warmup)
## Iteration: 1000 / 2000 [ 50%]  (Warmup)
## Iteration: 1001 / 2000 [ 50%]  (Sampling)
## Iteration: 1200 / 2000 [ 60%]  (Sampling)
## Iteration: 1400 / 2000 [ 70%]  (Sampling)
## Iteration: 1600 / 2000 [ 80%]  (Sampling)
## Iteration: 1800 / 2000 [ 90%]  (Sampling)
## Iteration: 2000 / 2000 [100%]  (Sampling)
##
##  Elapsed Time: 1.007 seconds (Warm-up)
##                0.387 seconds (Sampling)
##                1.394 seconds (Total)
```

```
summary(m1)
```

```
##
## Model Info:
##
##  function:     stan_lmer
##  family:       gaussian [identity]
##  formula:      Reaction ~ Days + (1 | Subject)
##  algorithm:    sampling
##  priors:       see help('prior_summary')
##  sample:       4000 (posterior sample size)
##  observations: 180
##  groups:       Subject (18)
##
## Estimates:
##                                          mean   sd     2.5%   25%    50%
## (Intercept)                             250.6   10.1  230.2  243.8  251.0
## Days                                     10.5    0.8    8.9    9.9   10.5
## b[(Intercept) Subject:308]               41.5   13.1   16.1   32.9   41.3
## b[(Intercept) Subject:309]              -76.9   13.3 -102.3  -85.9  -76.9
## b[(Intercept) Subject:310]              -61.9   13.0  -87.5  -70.8  -61.7
## b[(Intercept) Subject:330]                4.9   13.0  -19.4   -4.1    4.6
## b[(Intercept) Subject:331]               10.8   13.1  -14.3    1.9   10.6
## b[(Intercept) Subject:332]                8.8   13.1  -16.7    0.2    8.8
## b[(Intercept) Subject:333]               17.0   13.2   -8.7    8.1   17.3
## b[(Intercept) Subject:334]               -2.3   13.1  -28.5  -11.0   -2.2
## b[(Intercept) Subject:335]              -44.4   13.2  -68.9  -53.5  -44.8
## b[(Intercept) Subject:337]               72.8   13.1   47.2   63.9   72.8
## b[(Intercept) Subject:349]              -20.5   13.1  -45.5  -29.2  -20.5
## b[(Intercept) Subject:350]               14.8   13.1  -10.8    6.0   14.7
## b[(Intercept) Subject:351]               -7.3   13.1  -33.1  -15.8   -7.1
## b[(Intercept) Subject:352]               36.8   13.1   11.8   28.0   36.8
## b[(Intercept) Subject:369]                8.0   13.2  -17.5   -0.9    7.9
## b[(Intercept) Subject:370]               -5.4   13.0  -30.2  -14.2   -5.5
## b[(Intercept) Subject:371]               -2.4   13.1  -27.9  -11.2   -2.7
## b[(Intercept) Subject:372]               18.8   13.1   -6.8   10.1   18.5
## sigma                                    31.2    1.8   28.0   30.0   31.2
## Sigma[Subject:(Intercept),(Intercept)] 1504.5  573.1  698.7 1105.9 1394.3
## mean_PPD                                298.5    3.4  291.9  296.2  298.5
## log-posterior                          -912.0    4.6 -921.9 -915.0 -911.8
##                                          75%   97.5%
## (Intercept)                             257.4  269.6
```

```
## Days                                        11.0   12.1
## b[(Intercept) Subject:308]                  50.0   67.4
## b[(Intercept) Subject:309]                 -68.0  -50.0
## b[(Intercept) Subject:310]                 -53.4  -36.2
## b[(Intercept) Subject:330]                  13.5   31.5
## b[(Intercept) Subject:331]                  19.6   36.9
## b[(Intercept) Subject:332]                  17.6   35.2
## b[(Intercept) Subject:333]                  25.6   43.1
## b[(Intercept) Subject:334]                   6.0   23.1
## b[(Intercept) Subject:335]                 -35.4  -17.6
## b[(Intercept) Subject:337]                  81.4   97.8
## b[(Intercept) Subject:349]                 -11.8    5.4
## b[(Intercept) Subject:350]                  23.5   41.3
## b[(Intercept) Subject:351]                   1.1   19.4
## b[(Intercept) Subject:352]                  45.5   62.9
## b[(Intercept) Subject:369]                  16.7   34.8
## b[(Intercept) Subject:370]                   3.5   20.4
## b[(Intercept) Subject:371]                   6.2   24.0
## b[(Intercept) Subject:372]                  27.6   45.0
## sigma                                       32.4   35.0
## Sigma[Subject:(Intercept),(Intercept)] 1786.6 2872.6
## mean_PPD                                   300.8  305.2
## log-posterior                             -908.8 -904.2
##
## Diagnostics:
##                                           mcse Rhat n_eff
## (Intercept)                                0.4  1.0  616
## Days                                       0.0  1.0 3478
## b[(Intercept) Subject:308]                 0.4  1.0 1008
## b[(Intercept) Subject:309]                 0.4  1.0 1044
## b[(Intercept) Subject:310]                 0.4  1.0 1039
## b[(Intercept) Subject:330]                 0.4  1.0 1014
## b[(Intercept) Subject:331]                 0.4  1.0  997
## b[(Intercept) Subject:332]                 0.4  1.0 1051
## b[(Intercept) Subject:333]                 0.4  1.0  944
## b[(Intercept) Subject:334]                 0.4  1.0 1017
## b[(Intercept) Subject:335]                 0.4  1.0  936
## b[(Intercept) Subject:337]                 0.4  1.0 1080
## b[(Intercept) Subject:349]                 0.4  1.0  970
## b[(Intercept) Subject:350]                 0.4  1.0  983
## b[(Intercept) Subject:351]                 0.4  1.0  978
## b[(Intercept) Subject:352]                 0.4  1.0 1010
## b[(Intercept) Subject:369]                 0.4  1.0 1000
## b[(Intercept) Subject:370]                 0.4  1.0  952
## b[(Intercept) Subject:371]                 0.4  1.0  917
## b[(Intercept) Subject:372]                 0.4  1.0 1058
## sigma                                      0.0  1.0 2711
## Sigma[Subject:(Intercept),(Intercept)]    19.1  1.0  904
## mean_PPD                                   0.1  1.0 3920
## log-posterior                              0.2  1.0  821
##
## For each parameter, mcse is Monte Carlo standard error, n_eff is a crude measure of effective sample
```

```
plot(m1)
```




```
# should be 4.5
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

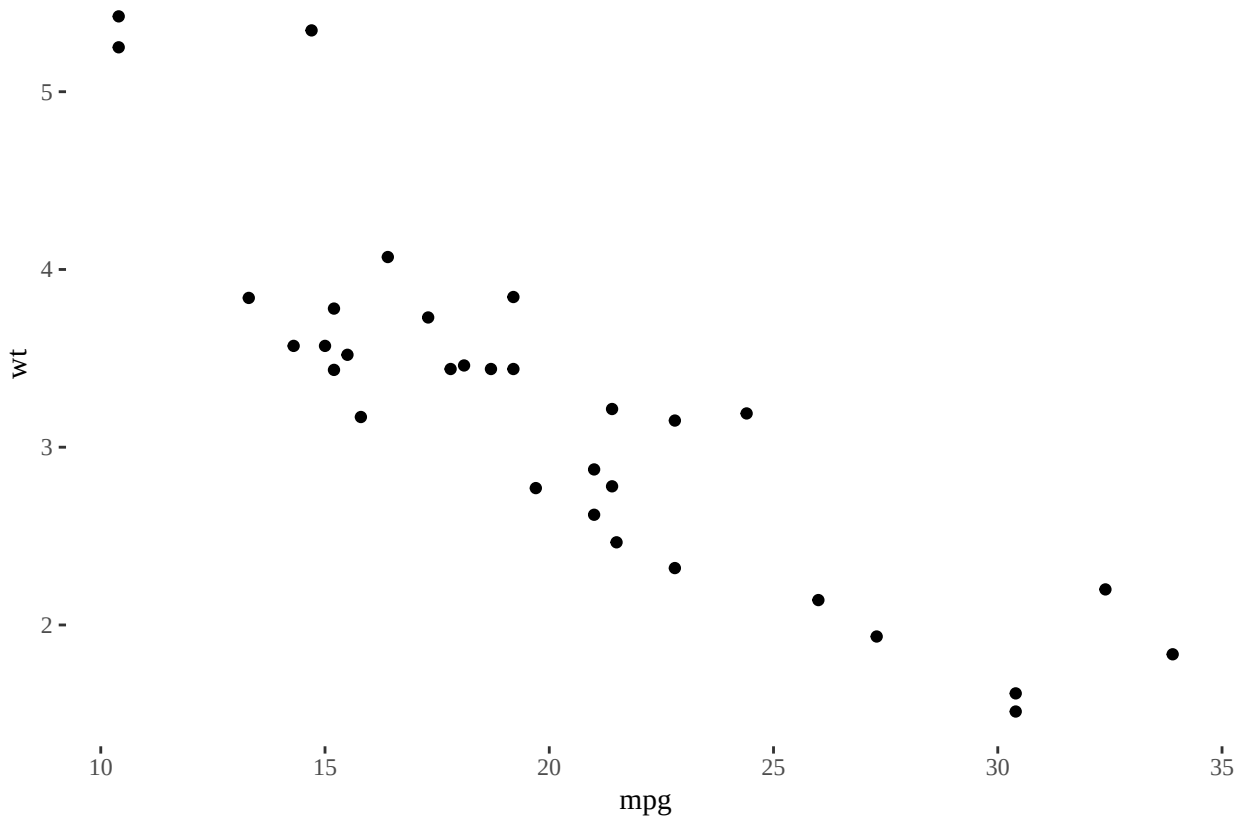
```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
lme4::sleepstudy %>%
  summarize(mean(Days))
```

```
##   mean(Days)
## 1        4.5
```

```
# should see a plot
library(ggplot2)
mtcars %>%
  ggplot(aes(mpg, wt)) + geom_point() + ggthemes::theme_tufte()
```




```
library(pander)
ip <- as.data.frame(installed.packages()[,c(1,3:4)])
rownames(ip) <- NULL
ip <- ip[is.na(ip$Priority),1:2,drop=FALSE]
ip %>%
   pander
```

	Package	Version
1	abind	1.4-5
2	acepack	1.4.1
3	AER	1.2-5
4	afex	0.18-0
5	apa	0.2.0
6	apaTables	1.5.1
7	arm	1.9-3
8	assertthat	0.2.0
9	backports	1.1.2
10	base64enc	0.1-3
11	bayesplot	1.4.0
12	BDgraph	2.43
13	BH	1.65.0-1
14	bindr	0.1
15	bindrcpp	0.2
16	binom	1.1-1
17	bitops	1.0-6
18	blme	1.0-4
19	bookdown	0.5
20	brew	1.0-6
21	bridgesampling	0.4-0
22	brms	2.0.1
23	Brobdingnag	1.2-4
24	broom	0.4.3
25	callr	1.0.0
26	car	2.1-6
27	caret	6.0-78
28	caTools	1.17.1
29	cellranger	1.1.0
30	checkmate	1.8.5
31	cli	1.0.0
32	clipr	0.4.0
33	coda	0.19-1
34	coin	1.2-2
35	colorspace	1.3-2
36	colourpicker	1.0
37	corpcor	1.6.9
38	corrgram	1.12
39	cowplot	0.9.2
40	crayon	1.3.4
41	crosstalk	1.0.0
42	curl	3.1
43	CVST	0.2-1

	Package	Version
44	d3Network	0.5.2.1
45	DAAG	1.22
46	data.table	1.10.4-3
47	DBI	0.7
48	dbplyr	1.2.0
49	ddalpha	1.3.1
50	dendextend	1.6.0
51	DEoptimR	1.0-8
52	devtools	1.13.4
53	DiagrammeR	0.9.2
54	DiagrammeRsvg	0.1
55	dichromat	2.0-0
56	digest	0.6.13
57	dimRed	0.1.0
58	diptest	0.75-7
59	downloader	0.4
60	dplyr	0.7.4
61	DRR	0.0.2
62	DT	0.2
63	dygraphs	1.1.1.4
64	ellipse	0.3-8
65	estimability	1.2
66	evaluate	0.10.1
67	extrafont	0.17
68	extrafontdb	1.0
69	ez	4.4-0
70	fdrtool	1.2.15
71	flexmix	2.3-14
72	forcats	0.2.0
73	foreach	1.4.4
74	Formula	1.2-2
75	fpc	2.1-10
76	gapminder	0.3.0
77	gclus	1.3.1
78	gdata	2.18.0
79	GGally	1.3.2
80	ggm	2.3
81	ggplot2	2.2.1
82	ggrepel	0.7.0
83	ggthemes	3.4.0
84	git2r	0.21.0
85	glasso	1.8
86	glue	1.2.0
87	gower	0.1.2
88	gplots	3.0.1
89	granova	2.1
90	gridExtra	2.3
91	gsl	1.9-10.3
92	gtable	0.2.0
93	gtools	3.5.0
94	haven	1.1.0
95	highr	0.6
96	Hmisc	4.1-1
97	hms	0.4.0
98	htmlTable	1.11.1
99	htmltools	0.3.6
100	htmlwidgets	0.9
101	httpuv	1.3.5
102	httr	1.3.1
103	huge	1.2.7
104	igraph	1.1.2
105	influenceR	0.1.0
106	inline	0.3.14
107	ipred	0.9-6
108	irlba	2.3.1
109	iterators	1.0.9
110	jpeg	0.1-8
111	jsonlite	1.5
112	kernlab	0.9-25
113	knitr	1.18
114	labeling	0.3
115	latticeExtra	0.6-28
116	lava	1.5.1
117	lavaan	0.5-23.1097
118	lazyeval	0.2.1
119	lisrelToR	0.1.4
120	lme4	1.1-15
121	lmerTest	2.0-36
122	lmtest	0.9-35
123	loo	1.1.0
124	lpSolve	5.6.13
125	lsmeans	2.27-61
126	lsr	0.5
127	lubridate	1.7.1
128	magrittr	1.5
129	margins	0.3.0
130	markdown	0.8
131	matrixcalc	1.0-3
132	MatrixModels	0.4-1
133	matrixStats	0.52.2
134	MBESS	4.4.2
135	mclust	5.4
136	mediation	4.4.6
137	memoise	1.1.0
138	merTools	0.3.0
139	mi	1.0
140	mice	2.46.0
141	mime	0.5
142	miniUI	0.1.1
143	minqa	1.2.4
144	mnormt	1.5-5
145	ModelMetrics	1.1.0
146	modelr	0.1.1
147	modeltools	0.2-21
148	multcomp	1.4-8
149	MuMIn	1.40.0

	Package	Version
150	munsell	0.4.3
151	mvtnorm	1.0-6
152	network	1.13.0
153	nloptr	1.0.4
154	numDeriv	2016.8-1
155	OpenMx	2.8.3
156	openssl	0.9.9
157	packrat	0.4.8-1
158	pander	0.6.1
159	pbivnorm	0.6.0
160	pbkrtest	0.4-7
161	pillar	1.0.1
162	pkgconfig	2.0.1
163	PKI	0.1-5.1
164	plogr	0.1-1
165	plotrix	3.7
166	plyr	1.8.4
167	png	0.1-7
168	prabclus	2.2-6
169	prediction	0.2.0
170	prettyunits	1.0.2
171	prodlim	1.6.1
172	progress	1.1.2
173	psych	1.7.8
174	purrr	0.2.4
175	pwr	1.2-1
176	qap	0.1-1
177	qgraph	1.4.4
178	quadprog	1.5-5
179	quantreg	5.34
180	R6	2.2.2
181	RColorBrewer	1.1-2
182	Rcpp	0.12.14
183	RcppEigen	0.3.3.3.1
184	RcppRoll	0.2.2
185	RCurl	1.95-4.10
186	readr	1.1.1
187	readxl	1.0.0
188	recipes	0.1.1
189	registry	0.5
190	rematch	1.0.1
191	reprex	0.1.1
192	reshape	0.8.7
193	reshape2	1.4.3
194	rgexf	0.15.3
195	rjson	0.2.15
196	RJSONIO	1.3-0
197	rlang	0.1.6
198	RLRsim	3.1-3
199	rmarkdown	1.8
200	robustbase	0.92-8
201	rockchalk	1.8.110
202	Rook	1.1-1
203	rpf	0.56
204	rprojroot	1.3-2
205	rsconnect	0.8.5
206	rstan	2.17.2
207	rstanarm	2.17.2
208	rstantools	1.4.0
209	rstudioapi	0.7
210	rsvg	1.1
211	Rttf2pt1	1.3.5
212	RUnit	0.4.31
213	rvest	0.3.2
214	sandwich	2.4-0
215	scales	0.5.0
216	selectr	0.3-1
217	sem	3.1-9
218	semPlot	1.1
219	semTools	0.4-14
220	seriation	1.2-2
221	servr	0.8
222	sfsmisc	1.1-1
223	shiny	1.0.5
224	shinyjs	0.9.1
225	shinystan	2.4.0
226	shinythemes	1.1.1
227	simr	1.0.3
228	sna	2.4
229	sourcetools	0.1.6
230	SparseM	1.77
231	StanHeaders	2.17.1
232	statcheck	1.2.2
233	statnet.common	4.0.0
234	stringi	1.1.6
235	stringr	1.2.0
236	TH.data	1.0-8
237	threejs	0.3.1
238	tibble	1.4.1
239	tidyr	0.7.2
240	tidyselect	0.2.3
241	tidyverse	1.2.1
242	timeDate	3042.101
243	trimcluster	0.1-2
244	TSP	1.1-5
245	tufte	0.2
246	utf8	1.1.3
247	V8	1.5
248	viridis	0.4.0
249	viridisLite	0.2.0
250	visNetwork	2.0.2
251	waffle	0.7.0
252	whisker	0.3-2
253	withr	2.1.1
254	XML	3.98-1.9
255	xml2	1.1.1

	Package	Version
256	xtable	1.8-2
257	xts	0.10-1
258	yaml	2.1.16
259	zoo	1.8-0
288	translations	3.4.3