Contents

Chapter 1

Introduction

This file documents the knitLatex package. The purpose of this package is to provide LaTeX helpers designed to work with the knitr package. The package provides functions. Three of which, xTab, sTab, and lTab create table, supertabular, and longtable environments in LaTeX respectively. The fourth function knitr_sethooks serves two purposes. First, it fixes a well-known bug in knitr which occurs when using custom hooks in a results='asis' environment. Secondly, knitr_sethooks provides a custom command called 'com'. When "com=TRUE" is set in a chunk, the resulting chunk is turned into a LaTeX command which can be referenced by the chunck label. For example, the chunk "⟨⟨mychuck⟩⟩" can be referenced with \mychuck anywhere is the documentand the resultant LaTeX will be the same as what normally would have appeared in the spot of the chunk.

The examples in the following chapters show the knitr chunk as a comment, followed by the code in the chunk with the results as they would appear in a LaTeX document. It is not the purpose of this file to document all of the options available within each function, but rather to show how they can be used (with and without "com = TRUE") in a LaTeX document. For a more detailed description of the options available, consult the individual vignettes (entitled 'xTab', 'sTab' and 'lTab'), as well as the individual documentations (i.e. '?xTab', '?sTab', and '?lTab').

Chapter 2

Preamble

The preamble to this document is as follows:

```
\usepackage{longtable,supertabular,hyperref}

#<<setup, include=FALSE>>=
# devtools::load_all is required to load the package because it is still in
# development. For the user, you simply need require(knitLatex)
  devtools::load_all('~/ignore/knitLatex', export_all=FALSE)
  knitr_sethooks()
  cars  <- mtcars[1:10,1:5]
  megacars  <- rbind(mtcars, mtcars, mtcars)

#<<mylongtable, echo=FALSE, com=TRUE, results='asis'>>=
  lTab(megacars,
       label = 'tab:mylongtable',
       caption.head = 'My Long Table')

#<<mysupertabular, echo=FALSE, com=TRUE, results='asis'>>=
  sTab(megacars,
       label = 'tab:mysupertabular',
       caption.top = 'My Supertabular')

#<<myplot, com=TRUE, fig.cap='myfigure'>>=
  boxplot(mpg ~ gear, megacars)

  @
```

Chapter 3

xTab

Because we set the label option as 'tab:mytable' we can type the following:

```
observe table \ref{tab:mytable} on page \pageref{tab:mytable}.
```

and produce this:

observe table 3.1 on page 4.

```
#<<mytable, results = 'asis'>>=
xTab(cars, label='tab:mytable', caption.bottom='My Table')
```

mpg	cyl	disp	hp	drat
21	6	160	110	3.9
21	6	160	110	3.9
22.8	4	108	93	3.85
21.4	6	258	110	3.08
18.7	8	360	175	3.15
18.1	6	225	105	2.76
14.3	8	360	245	3.21
24.4	4	146.7	62	3.69
22.8	4	140.8	95	3.92
19.2	6	167.6	123	3.92

Table 3.1: My Table

Chapter 4

sTab

This chapter demonstrates a supertabular environment created with sTab. In this example, we created a latex command called \mysupertabular in the preample of the document by setting 'com = TRUE' on the chunk.

The following table was produced in the preamble with this code (uncommented, of course):

```
#<<mysupertabular, echo=FALSE, com=TRUE, results='asis'>>=
sTab(megacars,
     label = 'tab:mysupertabular',
     caption.top = 'My Supertabular')
```

We then produce the table with the following command:

```
\mysupertabular
```

Table 4.1: My Supertabular

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb

Chapter 5

lTab

This chapter demonstrates a longtable environment create with lTab. In this example, we created a latex command called \mylongtable in the preample of the document by setting 'com = TRUE' on the chunk.

The following table was produced in the preamble with this code (uncommented, of course):

```
#<<mylongtable, echo=FALSE, com=TRUE, results='asis'>>=
lTab(megacars,
     label = 'tab:mylongtable',
     caption.head = 'My Long Table')
```

We then produce the table with the follwoing command:

```
\mylongtable
```

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2

Chapter 6

Figure

Even though the knitLatex package is primarily designed to be used with LaTeX tables, here is an example of using the 'com' hook with a figure. I did not set results='asis', but could have.

```
#<<myplot, com=TRUE, fig.cap='myfigure'>>=
boxplot(mpg ~ gear, megacars)
```

```
boxplot(mpg   gear, megacars)
```

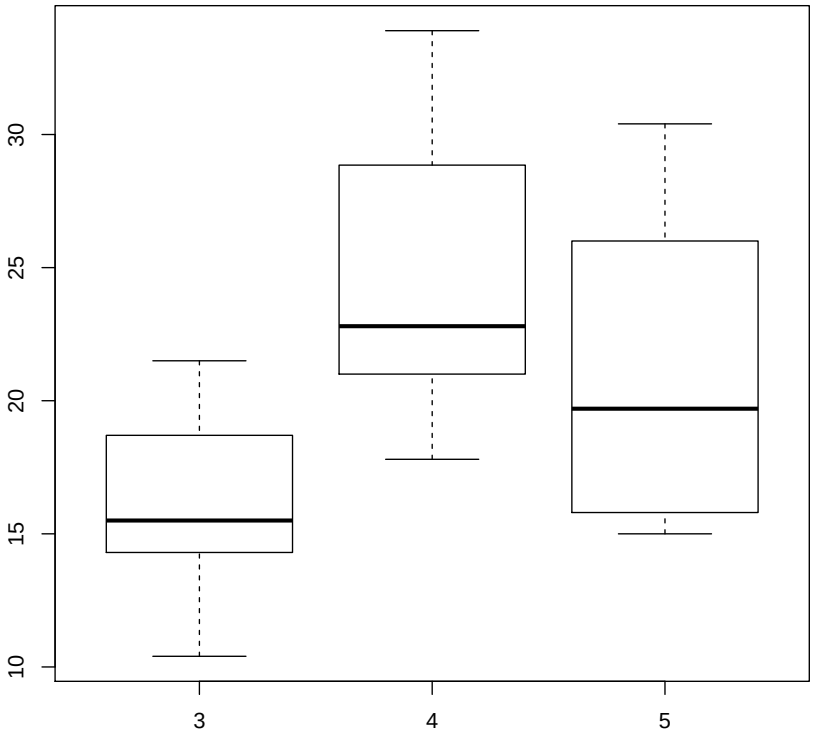

Figure 6.1: myfigure