

DEOHS Coders Group: Stargazer Practice

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Stargazer Overview

Here's a link to the stargazer [package description](#) and [vingette on CRAN](#). [This recent reddit thread](#) discusses the 'best' packages for displaying tables in R, including kabeExtra, pander, DT, Huxtable, and stargazer. Some users report that stargazer is fast and works easily with a set of regression model objects to produce near-publication quality tables, and can make it pretty simple to compare multiple models side-by-side. Other users, however, have reported challenges related to [hard coding, API, and L^AT_EX layout](#). Here's a [stargazer cheat sheet](#) for formatting options.

```
library(pacman)
```

```
## Warning: package 'pacman' was built under R version 3.6.2
```

```
p_load(stargazer)
```

Exercise with iris dataset

Step 1: Display table summary of iris dataset

```
summary(iris)
```

```
## Sepal.Length Sepal.Width Petal.Length Petal.Width
## Min. :4.300 Min. :2.000 Min. :1.000 Min. :0.100
## 1st Qu.:5.100 1st Qu.:2.800 1st Qu.:1.600 1st Qu.:0.300
## Median :5.800 Median :3.000 Median :4.350 Median :1.300
## Mean :5.843 Mean :3.057 Mean :3.758 Mean :1.199
## 3rd Qu.:6.400 3rd Qu.:3.300 3rd Qu.:5.100 3rd Qu.:1.800
## Max. :7.900 Max. :4.400 Max. :6.900 Max. :2.500
## Species
## setosa :50
## versicolor:50
## virginica :50
##
##
##
```

PDF

1. Stargazer with default settings

```
stargazer(iris)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Mon, Jan 27, 2020 - 1:44:54 PM
## \begin{table}[!htbp] \centering
## \caption{}
## \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccccc}
## \hline
## \hline \hline
## Statistic & \multicolumn{1}{c}{N} & \multicolumn{1}{c}{Mean} & \multicolumn{1}{c}{St. Dev.} & \multicolumn{1}{c}{Min} & \multicolumn{1}{c}{Pctl(25)} & \multicolumn{1}{c}{Pctl(75)} & \multicolumn{1}{c}{Max}
## \hline \hline
## Sepal.Length & 150 & 5.843 & 0.828 & 4.300 & 5.100 & 6.400 & 7.900 \\
## Sepal.Width & 150 & 3.057 & 0.436 & 2.000 & 2.800 & 3.300 & 4.400 \\
## Petal.Length & 150 & 3.758 & 1.765 & 1.000 & 1.600 & 5.100 & 6.900 \\
## Petal.Width & 150 & 1.199 & 0.762 & 0.100 & 0.300 & 1.800 & 2.500 \\
## \hline \hline
## \end{tabular}
## \end{table}
```

2. Hard-coded (copy and paste from above chunk) works for pdf (but not html)

Table 1:

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Sepal.Length	150	5.843	0.828	4.300	5.100	6.400	7.900
Sepal.Width	150	3.057	0.436	2.000	2.800	3.300	4.400
Petal.Length	150	3.758	1.765	1.000	1.600	5.100	6.900
Petal.Width	150	1.199	0.762	0.100	0.300	1.800	2.500

3. Adding results='asis'

```
stargazer(iris)
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Mon, Jan 27, 2020 - 1:44:54 PM

Table 2:

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Sepal.Length	150	5.843	0.828	4.300	5.100	6.400	7.900
Sepal.Width	150	3.057	0.436	2.000	2.800	3.300	4.400
Petal.Length	150	3.758	1.765	1.000	1.600	5.100	6.900
Petal.Width	150	1.199	0.762	0.100	0.300	1.800	2.500

HTML

4. Changing to type = html

```
stargazer(iris, type = "html")
```

```
##  
## <table style="text-align:center"><tr><td colspan="8" style="border-bottom: 1px solid black"></td></tr><tr><td colspan="8" style="border-bottom: 1px solid black"></td></tr><tr><td style="text-align:left">  
## <tr><td style="text-align:left">Sepal.Width</td><td>150</td><td>3.057</td><td>0.436</td><td>2.000</td><td>2.800</td><td>3.300</td><td>4.400</td></tr><tr><td style="text-align:left">Petal.Length</td><td>150</td><td>3.758</td><td>1.765</td><td>1.000</td><td>1.600</td><td>5.100</td><td>6.900</td></tr><tr><td style="text-align:left">Petal.Width</td><td>150</td><td>1.199</td><td>0.762</td><td>0.100</td><td>0.300</td><td>1.800</td><td>2.500</td></tr><tr><td colspan="8" style="border-bottom: 1px solid black"></td></tr></table>
```

5. Hard-coded (copy and paste from above chunk) works for html (but not pdf)

```
Statistic  
N  
Mean  
St. Dev.  
Min  
Pctl(25)  
Pctl(75)  
Max  
Sepal.Length  
150  
5.843  
0.828  
4.300  
5.100  
6.400
```

7.900
Sepal.Width
150
3.057
0.436
2.000
2.800
3.300
4.400
Petal.Length
150
3.758
1.765
1.000
1.600
5.100
6.900
Petal.Width
150
1.199
0.762
0.100
0.300
1.800
2.500

6. Adding results='asis'

```
stargazer(iris, type = "html")
```

Statistic
N
Mean
St. Dev.
Min
Pctl(25)
Pctl(75)
Max

Sepal.Length

150

5.843

0.828

4.300

5.100

6.400

7.900

Sepal.Width

150

3.057

0.436

2.000

2.800

3.300

4.400

Petal.Length

150

3.758

1.765

1.000

1.600

5.100

6.900

Petal.Width

150

1.199

0.762

0.100

0.300

1.800

2.500

DOC

7. Creating single table in word

```
stargazer(iris, type = "html", out="iris-table-summary.doc")
```

Statistic

N

Mean

St. Dev.

Min

Pctl(25)

Pctl(75)

Max

Sepal.Length

150

5.843

0.828

4.300

5.100

6.400

7.900

Sepal.Width

150

3.057

0.436

2.000

2.800

3.300

4.400

Petal.Length

150

3.758

1.765

1.000

1.600

5.100

6.900

Petal.Width

150

1.199
0.762
0.100
0.300
1.800
2.500

“To include stargazer tables in Microsoft Word documents (e.g., .doc or .docx), please follow the following procedure: Use the out argument to save output into an .htm or .html file. Open the resulting file in your web browser. Copy and paste the table from the web browser to your Microsoft Word document.” -[Using stargazer in Word](#)

Step 2: Display table models of iris dataset

8. Creating single model in html

```
m1 <- lm(Sepal.Length ~ Sepal.Width, data=iris)
stargazer(m1, type="html")
```

Dependent variable:

Sepal.Length

Sepal.Width

-0.223

(0.155)

Constant

6.526***

(0.479)

Observations

150

R2

0.014

Adjusted R2

0.007

Residual Std. Error

0.825 (df = 148)

F Statistic

2.074 (df = 1; 148)

Note:

$p < 0.1$; $p < 0.05$; $p < 0.01$

9. Creating single model in pdf

```
m1 <- lm(Sepal.Length ~ Sepal.Width, data=iris)
stargazer(m1, type="latex")
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
 % Date and time: Mon, Jan 27, 2020 - 1:44:55 PM

Table 3:

	<i>Dependent variable:</i>
	Sepal.Length
Sepal.Width	-0.223 (0.155)
Constant	6.526*** (0.479)
Observations	150
R ²	0.014
Adjusted R ²	0.007
Residual Std. Error	0.825 (df = 148)
F Statistic	2.074 (df = 1; 148)
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01	

10. Comparing three models in html

```
m1 <- lm(Sepal.Length ~ Sepal.Width, data=iris)
m2 <- lm(Petal.Length ~ Petal.Width, data=iris)
m3 <- lm(Sepal.Length ~ Sepal.Width + Petal.Width + factor(Species), data=iris)
stargazer(m1, m2, m3, type="html")
```

Dependent variable:

Sepal.Length

Petal.Length

Sepal.Length

(1)

(2)

(3)

Sepal.Width

-0.223

0.698***

(0.155)

(0.119)

Petal.Width


```

2.230***
0.372*
(0.051)
(0.198)
factor(Species)versicolor
0.988***
(0.275)
factor(Species)virginica
1.238***
(0.391)
Constant
6.526***
1.084***
2.521***
(0.479)
(0.073)
(0.394)
Observations
150
150
150
R2
0.014
0.927
0.732
Adjusted R2
0.007
0.927
0.725
Residual Std. Error
0.825 (df = 148)
0.478 (df = 148)
0.434 (df = 145)
F Statistic
2.074 (df = 1; 148)
1,882.452*** (df = 1; 148)

```

99.206*** (df = 4; 145)

Note:

$p < 0.1$; $p < 0.05$; $p < 0.01$

11. Comparing three models in pdf

```
m1 <- lm(Sepal.Length ~ Sepal.Width, data=iris)
m2 <- lm(Petal.Length ~ Petal.Width, data=iris)
m3 <- lm(Sepal.Length ~ Sepal.Width + Petal.Width + factor(Species), data=iris)

stargazer(m1, m2, m3, type="latex")
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Mon, Jan 27, 2020 - 1:44:55 PM

Table 4:

	<i>Dependent variable:</i>		
	Sepal.Length (1)	Petal.Length (2)	Sepal.Length (3)
Sepal.Width	-0.223 (0.155)		0.698*** (0.119)
Petal.Width		2.230*** (0.051)	0.372* (0.198)
factor(Species)versicolor			0.988*** (0.275)
factor(Species)virginica			1.238*** (0.391)
Constant	6.526*** (0.479)	1.084*** (0.073)	2.521*** (0.394)
Observations	150	150	150
R ²	0.014	0.927	0.732
Adjusted R ²	0.007	0.927	0.725
Residual Std. Error	0.825 (df = 148)	0.478 (df = 148)	0.434 (df = 145)
F Statistic	2.074 (df = 1; 148)	1,882.452*** (df = 1; 148)	99.206*** (df = 4; 145)

Note:

*p<0.1; **p<0.05; ***p<0.01

Exercise with mtcars dataset

```
summary(mtcars)

mtcars$fast <- as.numeric((mtcars$mpg > 20.1)) #Creating a dummy variable 1 = fast car
```

```

m1 <- lm(mpg ~ hp, data=mtcars)
m2 <- lm(mpg ~ hp + drat, data=mtcars)
m3 <- lm(mpg ~ hp + drat + factor(gear), data=mtcars)
m4 <- glm(fast ~ hp + drat + am, family=binomial(link="logit"), data=mtcars)
stargazer(m1, m2, m3, m4, type="html",
  dep.var.labels=c("Miles/(US) gallon", "Fast car (=1)"),
  covariate.labels=c("Gross horsepower", "Rear axle ratio", "Four foward gears",
    "Five forward gears", "Type of transmission (manual=1)"), out="models.htm")

```