

SAS with Rmarkdown

Melinda K. Higgins, PhD.

September 5, 2017

```
knitr::opts_chunk$set(echo = TRUE)
```

```
knitr::opts_chunk$get()$engine
```

```
## [1] "R"
```

```
knitr::opts_chunk$get()$engine.path
```

```
## NULL
```

```
knitr::opts_chunk$get()$engine.opts
```

```
## NULL
```

```
library(knitcitations)
```

Resource Link

To get started using SAS as your statistical software/data processing “engine” take a look at the following article: <http://www.ssc.wisc.edu/~hemken/SASworkshops/Markdown/SASmarkdown.html>.

Also read up on the SASmarkdown package .

Setup

To get started you need: 1. Have SAS installed locally on your machine (i.e. you need a licensed copy) 2. you need to know where on your local drive that your SAS executable is located. Mine is located at C:\Program Files\SASHome\SASFoundation\9.4\sas.exe. 3. Then setup your knitr options as follows:

```
saspath <- "C:/Program Files/SASHome/SASFoundation/9.4/sas.exe"
sasopts <- "-nosplash -ls 75"
knitr::opts_chunk$set(engine="sas", engine.path=saspath,
  engine.opts=sasopts, comment=NA)
```

Change settings to use HTML output from SAS

NOTE: You will need to install the SASmarkdown package first.

```
library(SASmarkdown)
```

```
## sas, saslog, sashtml, and sashtmllog engines
```

```
## are now ready to use.
```

```
saspath <- "C:/Program Files/SASHome/SASFoundation/9.4/sas.exe"
sasopts <- "-nosplash -linesize 75"
knitr::opts_chunk$set(engine="sashtml", engine.path=saspath,
  engine.opts=sasopts, comment=NA)
```

```
knitr::opts_chunk$get()$engine

## [1] "sashtml"

knitr::opts_chunk$get()$engine.path

## [1] "C:/Program Files/SASHome/SASFoundation/9.4/sas.exe"

knitr::opts_chunk$get()$engine.opts

## [1] "-nosplash -linesize 75"
```

Try some SAS code

This code chunk runs the PROC MEANS command from SAS using the built in dataset `sashelp.class`.

```
proc means data=sashelp.class;
run;
```

Variable

N

Mean

Std Dev

Minimum

Maximum

Age

Height

Weight

19

19

19

13.3157895

62.3368421

100.0263158

1.4926722

5.1270752

22.7739335

11.0000000

51.3000000

50.5000000

16.0000000

72.0000000

150.0000000

More SAS code

... and another SAS code chunk using the PROC CORR commands to see correlations between the variables and also visualize the scatterplot matrix.

```
proc corr data=sashelp.class plots=matrix;  
run;
```

3 Variables:

Age Height Weight

Simple Statistics

Variable

N

Mean

Std Dev

Sum

Minimum

Maximum

Age

19

13.31579

1.49267

253.00000

11.00000

16.00000

Height

19

62.33684

5.12708

1184

51.30000

72.00000

Weight

19

100.02632

22.77393

1901

50.50000

150.00000

Pearson Correlation Coefficients, N = 19 Prob > |r| under H0: Rho=0

Age

Height

Weight

Age

1.00000

0.81143

<.0001

0.74089

0.0003

Height

0.81143

<.0001

1.00000

0.87779

<.0001

Weight

0.74089

0.0003

0.87779

<.0001

1.00000

reset engine to R

To get this next chunk to run, you'll need to reset the `knitr` engine within the chunk options directly and then use the command `knitr::opts_chunk$set(engine="R", engine.path=NULL, engine.opts=NULL, comment=NA)` to reset back to R.

```
x <- 5
x
```

```
[1] 5
```

```
knitr::opts_chunk$get()$engine
```

```
[1] "sashtml"
```

```
knitr::opts_chunk$set(engine="R", engine.path=NULL,
  engine.opts=NULL, comment=NA)
knitr::opts_chunk$get()$engine
```

```
[1] "R"
```

...and here is a new chunk with no engine defined but the engine has defaulted back to R.

```
knitr::opts_chunk$get()$engine
```

```
[1] "R"
```

```
y <- 3
```

```
y
```

```
[1] 3
```