# Cars Analysis

#### Boris HD

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# R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

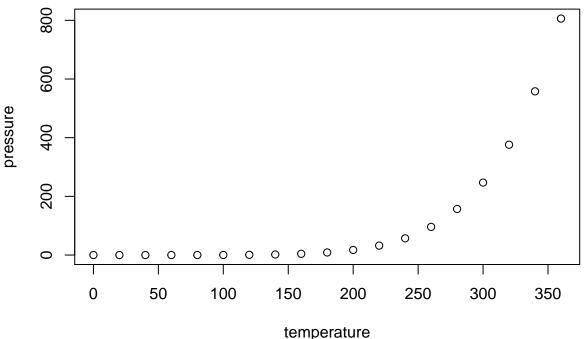
When you click the  $\mathbf{Knit}$  button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

### summary(cars)

```
##
        speed
                         dist
                              2.00
##
           : 4.0
                    Min.
                            :
    Min.
    1st Qu.:12.0
                    1st Qu.: 26.00
##
##
    Median:15.0
                    Median: 36.00
##
    Mean
            :15.4
                    Mean
                            : 42.98
    3rd Qu.:19.0
                    3rd Qu.: 56.00
##
            :25.0
                            :120.00
    Max.
                    Max.
```

# **Including Plots**

You can also embed plots, for example:

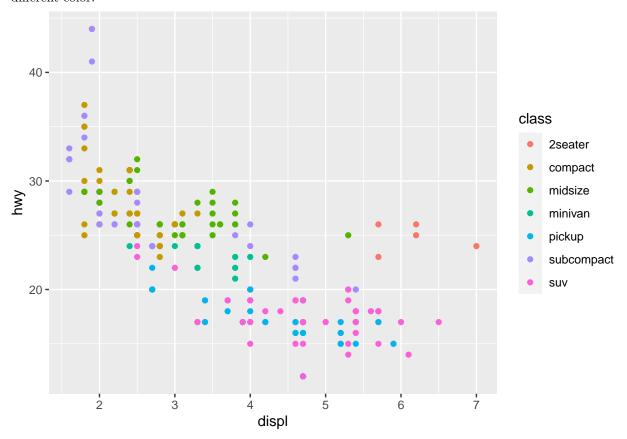


Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.

#### Additional content

Below is the additional content used to provide more information on cars data using the ggplot2 package. Please make sure the "ggplot2" package is installed, using the "install.packages("ggplot2')" command

The chart below displays a scatter-plot where the mpg on a highway is a function of the displacement 'displ' of the engine. Additionally, the plots are categorized by the class of the car. Each class is represented by a different color.



Through the chart we can identify a correlation between the displacement and the highway mpg, where the bigger the displacement, the lower the mpg. We can also identify another correlation, between the size of the car and the displacement, where the bigger the car the bigger the engine displacement. One notable exception, the "2seater" class; while being small cars tend to have a high displacement, yet a lower highway mpg compared to other car classes with a similar displacement.