

TwoSampleTTest.Rmd

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When you click the **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:

```
# Make mockup of MPG data
```

```
data(sleep)
str(sleep)
```

```
## 'data.frame':  20 obs. of  3 variables:
## $ extra: num  0.7 -1.6 -0.2 -1.2 -0.1 3.4 3.7 0.8 0 2 ...
## $ group: Factor w/ 2 levels "1","2": 1 1 1 1 1 1 1 1 1 ...
## $ ID    : Factor w/ 10 levels "1","2","3","4",...: 1 2 3 4 5 6 7 8 9 10 ...
```

```
mpg <- sleep$extra
am  <- as.integer(sleep$group)
car <- as.integer(sleep$ID)
mock <- as.data.frame(cbind(mpg, am, car))
str(mock)
```

```
## 'data.frame':  20 obs. of  3 variables:
## $ mpg: num  0.7 -1.6 -0.2 -1.2 -0.1 3.4 3.7 0.8 0 2 ...
## $ am : num  1 1 1 1 1 1 1 1 1 1 ...
## $ car: num  1 2 3 4 5 6 7 8 9 10 ...
```

```
mock$mpg <- 15 + (mock$mpg * 4)
mock$am  <- factor(mock$am, labels = c("automatic", "manual") )
mock$car <- factor(mock$car)
```

Paired versus independent

```
library(ggplot2)
```

```
##
## Attaching package: 'ggplot2'
##
## The following object is masked _by_ '.GlobalEnv':
##
##     mpg
```

```

g <- ggplot(mock, aes(x = am, y = mpg, group = factor(car)))
g <- g + geom_line(size = 1, aes(colour = car)) +
  geom_point(size = 10, pch = 21,
             fill = "salmon", alpha = .5)
g + labs(x = "transmission", title = "Mockup of MPG Difference \nUsing Paired Car Models")

```

