



R Code for Examples in the book
"Statistics: The Art and Science of Learning from Data"
 by Agresti, Franklin and Klingenberg, 5th edition

Chapter 14

Example 9: Corn Yield – Testing the Main Effects

Reading in data

```
corn <-
read.csv(file='https://raw.githubusercontent.com/artofstat/data/master/Chapter14/corn_yield.csv')
head(data, 3)

## fertilizer manure yield
## 1      high   high 13.7
## 2      high   high 15.8
## 3      high   high 13.9
```

Fitting in regression model

```
linReg <- lm(yield ~ fertilizer + manure, data = corn)
```

To get the two-way ANOVA

```
aov <- anova(linReg)
aov

## Analysis of Variance Table
##
## Response: yield
##           Df Sum Sq Mean Sq F value Pr(>F)
## fertilizer  1  17.67   17.67    6.33  0.02 *
## manure      1  19.21   19.21    6.88  0.02 *
## Residuals 17  47.44    2.79
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```