



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

## Chapter 13

### Example 7: Female Athletes' Weight – Confidence Interval for $\beta$

#### Reading in data

```
data <-  
read.csv(file='https://raw.githubusercontent.com/artofstat/data/master/Chapter13/college_female_athletes.csv')
```

#### Fitting in multiple regression model

```
lin.reg <- lm(TBW ~ HGT + BF + AGE, data = data)  
lin.reg  
  
##  
## Call:  
## lm(formula = TBW ~ HGT + BF + AGE, data = data)  
##  
## Coefficients:  
## (Intercept)          HGT           BF          AGE  
##   -97.6938       3.4285    136.4265    -0.9601
```

#### To obtain confidence intervals for the regression coefficients

```
round(confint(lin.reg), 1)  
  
##           2.5 % 97.5 %  
## (Intercept) -155.3 -40.1  
## HGT          2.7   4.2  
## BF           73.9 198.9  
## AGE          -2.3   0.3
```