**R Code for Examples in the book**



***“Statistics: The Art and Science of Learning from Data”***

**by Agresti, Franklin and Klingenberg, 5th edition**

**Chapter 6**

**Example 5: Risk Taking – Standard Deviation of a Probability Distribution**

## Reading in the data for the sure strategy

gains\_sure <- 500  
probs\_sure <- 1

## To compute the variance

variance\_sure <- sum(((gains\_sure - mean(gains\_sure)) \*\* 2) \* probs\_sure)  
variance\_sure

## [1] 0

## To compute the standard deviation

sqrt(variance\_sure)

## [1] 0

## Reading in the data for the risk-taking strategy

gains\_risk <- c(0, 1000)  
probs\_risk <- c(0.5, 0.5)

## To compute the variance

variance\_risk <- sum(((gains\_risk - mean(gains\_risk)) \*\* 2) \* probs\_risk)  
variance\_risk

## [1] 250000

## To compute the standard deviation

sqrt(variance\_risk)

## [1] 500