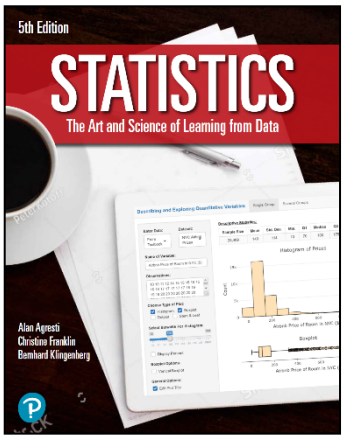

R Code for Examples in the book
"Statistics: The Art and Science of Learning from Data"
by Agresti, Franklin and Klingenberg, 5th edition

Chapter 13

Example 12: Travel Credit Cards – Logistic Regression Model

Reading in data

```
data <-
read.csv(file='https://raw.githubusercontent.com/artofstat/data/master/Chapter13/credit_card_and_income.csv')
colnames(data) # check column names

## [1] "adult"  "income" "y"
```

Fitting in logistic regression model

```
logit.reg <- glm(y ~ income, data = data, family = 'binomial')
```

To view a summary of the logistic regression model

```
summary(logit.reg)

##
## Call:
## glm(formula = y ~ income, family = "binomial", data = data)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -1.8164  -0.6611  -0.5190   0.3425   2.0805
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept) -3.51795    0.71029  -4.953 7.31e-07 ***
## income       0.10541    0.02616   4.030 5.58e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 123.820  on 99  degrees of freedom
## Residual deviance:  97.226  on 98  degrees of freedom
## AIC: 101.23
##
## Number of Fisher Scoring iterations: 4
```