Corrections to Abraham and Ledolter: Introduction to Regression Modeling

Page 24, line 30 (left panel):

… invested principal (1,000, 1,200, and 1,500).

Page 30, first line after 2.3.2:

Replace “Minimization” with “Maximization”

Page 117, line 6 from bottom (in equation):

$$F^* = \frac{(A\hat{\beta} - \delta)'[A(X'X)^{-1}A']^{-1}(A\hat{\beta} - \delta)/l}{S(\hat{\beta})/(n - p - 1)}$$

Page 130, insert in line 1:

… known specified weights, and $\mathbf{x}_i'$ is the ith row of the matrix X.

Page 303, equation (9.33):

$$y = \beta_1 + \frac{\beta_3}{1 + \exp[-\beta_2(x - \beta_4)} + \varepsilon$$

Pages 351, in equations (11.13) to (11.15) write:

$$\frac{\partial \ln L(\boldsymbol{\beta})}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{m} \frac{\partial\{y_i \ln \pi_i + (n_i - y_i)\ln(1 - \pi_i)\}}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{m} \frac{\partial\{y_i \ln \pi_i + (n_i - y_i)\ln(1 - \pi_i)\}}{\partial \pi_i} \frac{\partial \pi_i}{\partial \boldsymbol{\beta}}$$

$$= \sum_{i=1}^{m} \left[\frac{y_i}{\pi_i} - \frac{n_i - y_i}{1 - \pi_i} \right] \pi_i(1 - \pi_i)\boldsymbol{x}_i = \sum_{i=1}^{m} (y_i - n_i\pi_i)\boldsymbol{x}_i \quad .$$

Page 354, equation (11.26):

$$D = 2\ln \frac{L(saturated)}{L(full)} = ...$$

Pages 384, Replace equations (12.8) and (12.9) with:

$$\frac{\partial \ln L}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{n} \frac{\partial \{y_i \ln \mu_i - \mu_i\}}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{n} \frac{\partial \{y_i \ln \mu_i - \mu_i)\}}{\partial \mu_i} \frac{\partial \mu_i}{\partial \boldsymbol{\beta}} \qquad (12.8)$$

$$= \sum_{i=1}^{n} \frac{y_i - \mu_i}{\mu_i} \mu_i \boldsymbol{x}_i = \sum_{i=1}^{n} (y_i - \mu_i) \boldsymbol{x}_i \qquad (12.9)$$

Page 406, Solution to Exercise 4.12(b): (also page 22 of Solutions Manual)

F = … = 0.73; p value = P(F(2,11) > 0.73) = 0.56