## Errors in Foundations of Linear and Generalized Linear Models

My sincere thanks to anyone who points out errors in this book. So far, thanks to Muharrem Bagniyanik, Achraf Cohen, Mark Glickman, Pekka Pere, Samantha Seals, and Annie Zhu.

**All printings so far contain the following errors:**

p. 31: In the graph in Figure 2.1, $y_z$ should be $y_2$.

p. 70: The final sentence states that $\text{var}(e_i) = \sigma_i^2(1 - h_{ii})$. When the variances are identical this is true, but otherwise,

$$\text{var}(\boldsymbol{e}) = \text{var}(\boldsymbol{y} - \hat{\boldsymbol{\mu}}) = \text{var}((\boldsymbol{I} - \boldsymbol{H})\boldsymbol{y}) = (\boldsymbol{I} - \boldsymbol{H})diag(\sigma_i^2)(\boldsymbol{I} - \boldsymbol{H}),$$

which does not simplify so.

p. 73, Exercise 2.17. An exception is when $\hat{\boldsymbol{\beta}} = 0$ is a solution (such as when $\boldsymbol{y} = 0$ or $\boldsymbol{y}$ is orthogonal to the columns of $\boldsymbol{X}$).

p. 155. In the final model fitted, the output should say "family=gaussian" instead of "family=Gamma". By the way, the outlying observation (number 64) that is highly influential for the normal model is not for the gamma model, which expects greater variability when the mean of $y$ is greater. With predictors size and new and an interaction term, when observation 64 (an older home) is deleted from the data file, the size effect for older homes changes from 0.104 to 0.123 in the normal model, but it changes only from 0.094 to 0.098 for the gamma model.

p. 200, Exercises 5.33 and 5.34. These exercises refer to the dataset Crabs4.dat, not Crabs2.dat. In Crabs4.dat, y=0 is monandrous and y=1 is polyandrous.

p. 215, Figure 6.3. The second panel shows two observations for the $z = 1$ group that are mistakenly placed below the level $y = 1$, at low values for $x$. They should be at the $y = 1$ level but at values of $x$ above 80. (The correct figure is Figure 1.1 in the 2nd edition of my book, *Analysis of Ordinal Categorical Data*).

p. 341, line 7: In the expression for $\tilde{\mu}$, the exponent 2 should be $-2$ in each of the four places. Alternatively, $\sigma_1^2$ and $\sigma_2^2$ should be interchanged in this expression.

p. 404: Solution to Exercise 5.17a. In the second sentence, *ungrouped* should be *grouped*.