Errata

Introduction to Probability, 2nd Edition
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(last updated 8/24/20)

- p. 48, line −5: Change “n-element subset” to “n-element set”
- p. 123, line 11: The solution to this problem was inadvertently included (Problem 2.19 is not a starred problem). Moreover the solution given in the text for part (a) is incorrect. The correct solution is given in the on-line solutions.
- p. 192, line 9: Change twice “$\prod_{i=1}^{n} E[X_i^2]$” to “$\prod_{i=1}^{n} (E[X_i])^2$”
- p. 230, line 13: Change “$M(s) = E[sX]$” to “$M(s) = E[s^X]$”
- p. 307, line −4: Change “Gary” to “Garry”
- p. 445, line −14: “1/5” should read “1/\(\sqrt{5}\)”
- p. 454, line 10: “$\hat{\Theta}$” should read “$\hat{\Theta}_L$”
- p. 481, line −4: The formula for $\hat{\theta}_1$ should be changed to
  \[ \hat{\theta}_1 = \frac{1}{b - a \bar{x}^2} \left( \frac{1}{n} \sum_{i=1}^{n} x_i y_i - a \bar{x} \bar{y} \right), \]
  where
  \[ a = \frac{n \sigma_0^2}{\sigma^2 + n \sigma_0^2}, \quad b = \frac{\sigma^2 + \sigma_1^2 \sum_{i=1}^{n} x_i^2}{n \sigma_1^2}. \]
  Note that the non-Bayesian formula on p. 477 is recovered if we let $\sigma_0$ and $\sigma_1$ go to infinity. In that case, $a$ approaches 1, and $b$ approaches $\sum_{i=1}^{n} x_i^2$.
- p. 511, line −14, −15: Change three occurrences of $e^{-\theta}$ to $e^{-n\theta}$
- p. 513, line 2: Delete $\leq 1$

Corrections to the 3rd printing:

The following are corrections to the third printing of the book, and have been fixed in subsequent printings (Nov. 2013 and later).

- p. 79, line −2: Change “Polish” to “Prussian”
- p. 279, line −4: Change “0.5675” to “05675”
- p. 319, line −5, −6: Change “events at different times are independent, it follows that the random variables $L_1, L_2, \ldots$ are independent.” to “events relating to arrivals at different times are independent, it follows that the events $L_1, L_2, \ldots$ are independent.”
- p. 385, figure caption: “Problem 11” should read “Problem 13”
- p. 427, line −14: Change “= $c(k)p_\Theta(i) p_t^k (1 - p_1)^{n-k}$” to “$= c(k)p_\Theta(i) \binom{n}{k} p_t^k (1 - p_1)^{n-k}$”
- p. 427, lines −1, −2, p. 428 line 1: Change equation to
  \[ P(\text{error}) = P(\Theta = 1, X > k^*) + P(\Theta = 2, X \leq k^*) \]
  \[ = p_\Theta(1) \sum_{k=k^*+1}^{n} \binom{n}{k} p_1^k (1 - p_1)^{n-k} + p_\Theta(2) \sum_{k=1}^{k^*} \binom{n}{k} p_2^k (1 - p_2)^{n-k} \]
  \[ = \frac{1}{2} \left( \sum_{k=k^*+1}^{n} \binom{n}{k} p_1^k (1 - p_1)^{n-k} + \sum_{k=1}^{k^*} \binom{n}{k} p_2^k (1 - p_2)^{n-k} \right). \]
- p. 428, line 2: Delete “where $c(k)$ is a positive normalizing constant.”
Corrections to the 1st and 2nd printing:

The following are corrections to the first and second printing of the book, and have been fixed in the third printing. Books from the 2nd and 3rd printing can be identified by the entry “Second printing” or “Third printing” below the ISBN number in the copyright page in the front.

- p. 10, line +3: “(A₂ ∪ A₂)” should read “(A₂ ∪ A₃)”
- p. 204, caption of Figure 4.1: “4.20” should read “4.2”
- p. 226, line 12: “X = X + X” should read “X = X - X”
- p. 234, line 16: in the definition of the event A, “f_Y(y)δ” should read “λδ”
- p. 334, line 16: The fonts for figures 8.5 and 8.6 were corrupted. The corrected figures are shown below
- p. 427, 428: The fonts for figures 8.5 and 8.6 were corrupted. The corrected figures are shown below
- p. 427, last line: \( \frac{a}{n} \) should read \( \left( \frac{a}{n} \right)^2 \)
- p. 447, line −10: “and variance 0.245” should read “and variance \( \hat{S}_n^2/n \)”
Choose $\Theta = 1$  \hspace{1cm} Choose $\Theta = 2$