Errata

A Modern Introduction to Probability and Statistics
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In the main text

p.336 Solution to Quick Exercise 22.2. “Rewriting \( \hat{\alpha} = \bar{y}_n - \hat{\beta} \),” should read “Rewriting equation (22.2): \( \hat{\alpha} = \bar{y}_n - \bar{\beta} \bar{x}_n \).”

p.366 \( h^{-1} \) en \( g^{-1} \) should be \( h^{\text{inv}} \) en \( g^{\text{inv}} \).

p.393 Third line of this page: \( \theta_0 \neq \theta_0 \) should be \( \theta \neq \theta_0 \).

p.402 In Quick Exercise 27.2: “at level \( \alpha = 0.05 \).”

p.405 Replace “annual mortality rate (percentage of deaths)” by “annual mortality rate (number of deaths per 100 000).”

In the figures

p.237 in Figure 16.4 left hand side the \( y \)-axis should be expressed in seconds—\( \bar{y} \)—as the right hand side.

p.264 In the caption of Figure 17.12 “and empirical distribution function” is added.

p.330 In Figure 22.1: instead of “The regression line \( y = \alpha x = \beta \).” the text labeling the regression line should read “The regression line \( y = \alpha + \beta x \).”

p.406 Replace “mortality rate (%)” by “mortality rate” in Figure 27.3. Also: multiply the numbers on the vertical axis by 1 000.
In the exercises

p.39 □ symbol has been added in Exercises 3.14 and 3.16.

p.39 Exercise 3.16\textbf{b} is not complete. Addendum:

The “unconscious” way to do this is to replace $P(D)$ by the answer you found in \textbf{a} and then perform the calculation from part \textbf{a} again. If you do it the \textit{conscientious} way, you try to compute $P(D \mid S \cap T)$, where $S$ is the event “the second test says you have the disease”. You will find that you need the independence assumption $P(S \cap T \mid D) = P(S \mid D)P(T \mid D)$ and a similar one for $D^c$.

p.52 In Exercise 4.4: add ”(once!)” to “each coin is tossed again”.

p.113 Exercise 8.16 is pointing to a non-existing exercise in Chapter 11. Action: remove the ‘Remark’.

p.113 Add in Exercise 8.17: ‘continuous’ (it points to Exercise 8.9).

p.144 Exercise 10.1 has been replaced by a completely new exercise. Although not wrong, the old exercise was somewhat peculiar since it was taking expectations of hair colors.

p.146 For the sake of uniformity: exchange $a$ en $b$ in Exercise 10.7 en change $p_X(a)$ en $p_Y(b)$ into $P(X = a)$ and $P(Y = b)$.

p.203 Exercise 14.1 is not wrong, but its solution is 1, which is confusing for certain students. The question now is $P(X_1 + \cdots + X_{144} > 264)$; the answer is then $1 - \Phi(-1)$.

p.241 In Exercise 16.4, it is better to give the sample mean as $492/11$ instead of $44.7). Similarly write $\sqrt{482/11}$ for the standard deviation for the Wick data in Exercise 16.5.

p.281 Since Exercise 18.6\textbf{a} is the same as Exercise 5.11 this has been set in the text.

p.371 Exercise 24.9: “$\leq c_u$” should be “$\geq c_u$”.

p.428 In Exercise 28.6 \textbf{d} en \textbf{e} $S^2_p$ should be changed to $S^2_d$.
In the answers and full solutions

p.445 The full solution answer to Exercise 2.14b is not correct: “candidate wins the car” is the event \{(a, b), (a, c)\}.

p.435 Answer to Exercise 4.1c: 25/36 instead of 253/36.

p.450 In the Full solution of Exercise 6.12 replace “We sell the our shares” by “We sell our shares”.

p.450 In the Full solution of Exercise 7.15a a “)” and “2” a should be interchanged.

p.452 Full solution to Exercise 9.9c is not correct: A factor 2 is missing in the second integral.

p.438 Answer van Exercise 11.1a is not correct: for \(k\) between 7 and 12 the summation runs over \(\ell = k - 6, \ldots, 6\). Also: in the answer of Exercise 11.1b the last 2N should be N.

p.457 Remove the e following Exercise 12.1. Also: replace 1,2,3,4,5 by a,b,c,d,e.

p.458 Full solution to Exercise 13.4c: change “size 0.2 or”...“or” to “size 0.2 or larger occurs”

p.439 The answer to Exercise 13.8a: change “where \(\bar{Y}_n\) as in” to “with \(\bar{Y}_n\) as in”; also change “the standard deviation” in a to “variance.”

p.439 Answer to Exercise 13.8b: change 801 in to 799.

p.439 Answer to Exercise 14.6a: \(P(X < 26) \approx 0.5910\).

p.463 In the full solution to Exercise 18.8a: replace “\(\bar{x}_n\) is” by “\(\bar{x}_n^*\) is”.

p.464 In the full solution to both 18.8b and 18.8c: replace “\(\bar{x}_n\) is” by “\(\bar{x}_n^*\) is”.

p.464 In the full solution of Exercise 19.1b: \(g''(x) = x^{-3/2}/4\).

p.466 In the full solution of Exercise 21.8b: the equation should be \(3839\theta^2 + 1655\theta - 64 = 0\).

p.443 In the answer of Exercise 26.6b the critical region consists of integers: \(\{1536, 1537, \ldots\}\).
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