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): $\hat{\alpha} = \bar{y}_n - \beta \bar{x}_n$.”

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—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 3.16b is not complete. Addendum:

The “unconscious” way to do this is to replace \( P(D) \) by the answer you found in \( \text{a} \) and then perform the calculation from part \( \text{a} \) again. If you do it the 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p.144 Exercise 10.1 has been replaced by a completely new exercise.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 In 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 18.6a 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 \( \text{d} \) en \( \text{e} \) \( S_p^2 \) should be changed to \( S_d^2 \).
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 (c)’ 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 2\( N \) 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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