Data Science and Machine Learning:
Mathematical and Statistical Methods

Errata
(Last Update 13th March 2020)

1. Page 72, Line −2: … in terms of the probability … (remove repeated "the").
2. Page 100, Line −8: $(1-\alpha\boldsymbol{v})$ should be $(1-\alpha)\boldsymbol{v}$.
3. Page 162: Line 12: $\mathbf{\Sigma}^{1/2}\boldsymbol{x}$ should be $\mathbf{\Sigma}^{-1/2}\boldsymbol{x}$.
4. Page 162: Lines 17 and 20: $\mathbf{\Sigma}^{1/2}(\boldsymbol{x}_i-\boldsymbol{\mu})$ should be $\mathbf{\Sigma}^{-1/2}(\boldsymbol{x}_i-\boldsymbol{\mu})$.
5. Page 211, Exercise 12 (b): $\mathbf{P}_{ii}$ should be $(1-\mathbf{P}_{ii})$; that is 1 minus the i-th leverage.
6. Page 221, Line 8: … one obtains the so-called …
7. Page 247, Algorithm 6.8.1, Line 1: $\mathbb{R}^p$ should be $\mathbb{R}^n$.
8. Page 248, Algorithm 6.8.2, Line 1: Set $\mathbf{B} \leftarrow (n\gamma\mathbf{I}_p)^{-1}$.
9. Page 273, 3rd line under Figure 7.9: The results are summarized in Table 7.6.
10. Page 329, line 12 from below: change y_{i-k} to y_{i-k+1}.
11. Page 331, last displayed equation:
$$\frac{\partial C}{\partial \boldsymbol{b}_l} = \frac{\partial \boldsymbol{z}_l}{\partial \boldsymbol{b}_l}\frac{\partial C}{\partial \boldsymbol{z}_l} = \boldsymbol{\delta}_l, \quad l = 1, \dots, L.$$
12. Page 335, Algorithm 9.4.2, Line 2: … using $\frac{\partial C}{\partial \boldsymbol{g}} = 1$ …
13. Page 340, second displayed line:
$$[p_0, p_1, p_2, p_3] = [1, 20, 20, 1].$$
14. Page 341, Line 3: Remove the line `S = RELU`.
15. Page 351, Exercise 7(b): In the displayed formula, $\mathbf{B}$ should be replaced with $\mathbf{B}^{-1}$.
16. Page 362, Sentence above Theorem A.4: … where $\mathbf{U}$ is not …
17. Page 380, third line from below: change b_{i-k} to b_{i-k+1}.
18. Page 394, line 5: ... can be computed with the aid ... (missing "the")
19. Page 404, last two lines: replace H with $\mathbf{H}$.
20. Page 414, Section B.3.4: Replace ℓ with ℓ_τ.
21. Page 456, Sentence under (C.47): Similar to the one-dimensional case ($d = 1$), replacing the factor $1/n$ with $1/(n-1)$ gives an unbiased estimator, called the *sample covariance matrix*.