## ERRATA

# INFERENCE AND LEARNING FROM DATA <br> by 

Ali H. Sayed<br>École Polytechnique Fédérale de Lausanne (EPFL), Switzerland University of California at Los Angeles (UCLA), USA

## A. H. Sayed, Inference and Learning from Data, 3 vols., Cambridge University Press, 2022.

VOL I: Foundations
VOL II: Inference
VOL III: Learning

Readers are welcome to bring to the attention of the author any typos or suggestions for improvement. Please feel free to email the author directly at ali.sayed@epfl.ch or sayed@ucla.edu.

The author is thankful for all feedback.

Last updated: May 9, 2024.

## ERRATA

Last updated May 9, 2024

1. Chapter 2, p. 64, Table 2.1, property 7: replace $A^{\top}$ by $A$ on RHS.
2. Chapter 2, p. 67, Prob. 2.11, item (c): replace $A^{\top}$ by $A$ on the RHS.
3. Chapter 3, p. 117, Prob. 3.54: write $(b-a)^{2}$ in last bound; square is missing.
4. Chapter 11, p. 342, Eq. (11.8): replace $\mathbb{I}_{C, \infty}(w)$ by $\mathbb{I}_{C, \infty}[w]$ with brackets.
5. Chapter 28, p. 1104, Eq. (28.65): change to $(0.5 \times 0.4238) / 0.2845 \approx 0.7448$. In the following sentence, change "less" to "larger" and "virginica" to "setosa".
6. Chapter 50, p. 2204, Prob. 50.9: $w_{\text {reg }}^{\star}=\left(I_{M}+\rho Q^{-1}\right)^{-1} w^{\star}$, with $Q$ inverted.
7. Chapter 52, p. 2283, Prob. 52.5: $\left\|h-h_{a}\right\| \leq\left\|h-h_{n}\right\|$, with no square.
8. Chapter 59, p. 2489, Prob. 59.4: $\sigma(z)=\ln \left[1 /\left(1+e^{-z}\right)\right]$. The $\log$ is missing.
9. Chapter 61, p. 2544, 2nd paragraph, 4th line: $\lambda^{\star}\left(n_{2}\right)$. The star is missing.
10. Chapter 64, p. 2667, Eq. (64.28): replace $h_{n}^{\top} w \neq \gamma(n)$ by $c(w) \neq \gamma(n)$.
11. Chapter 64, p. 2670, Fig. 64.11: replace $\max (0, y)$ by $\max (0,-y)$.
12. Chapter 64, p. 2684, Prob. 64.30: replace the statement about $\boldsymbol{h}(m)$ in the first paragraph by "Let $\boldsymbol{h}$ be a scalar random feature that can assume one of $M$ possible discrete values denoted by $\{h(m)\}$." In part (a), the probability expression on the right-hand side should become $\mathbb{P}(\boldsymbol{h}=h(m) \mid \boldsymbol{\gamma}=\gamma)$.
13. Chapter 65, p. 2756, Eq. (65.133): $D_{\mathrm{KL}}(p \| s)$, with $\|$ instead of comma.
