Steinwart, I. and Christmann, A. (2008).
Support Vector Machines. Springer, New York.
ERRATA. Date: September 14, 2011

Preface

Reading Guide

1. Introduction

2. Loss Functions and Their Risks

- P35, Lemma 2.25 v): instead of "L is a P-integrable ..." write "If L is continuous or if $L(y,t)$ is bounded on all intervals $[-t, +t]$ for $t \in \mathbb{R}$, then L is a P-integrable ..."

- P35, Proof of Lemma 2.25 v): instead of "Finally, v) follows from ..." write "Finally, v) follows from
  $$L(y,t) \leq \max\{\varphi(-t), \varphi(t)\} \leq \max_{z \in [0,|t|]}\{\varphi(-z), \varphi(z)\}, \quad y \in Y, t \in \mathbb{R}."$$

- P36, L11: instead of "L_{LS}" write "$L_{\mathrm{trunc\text{-}ls}}$"

- P39, L16: instead of "supp Q" write "supp Q"

- P41, Definition 2.37:

$$|\mathrm{P}|_p := \left(\int_{X \times \mathbb{R}} |y|^p \, d\mathrm{P}(x,y)\right)^{1/p} = \dots.$$

3. Surrogate Loss Functions (*)

4. Kernels and Reproducing Kernel Hilbert Spaces

- P113, L–4: instead of "$x, x' \in X$" write "$x, x' \in \tilde{X}$"

- P115, L19: instead of "$k(z, z') := f(\langle z, z'\rangle)_{\mathbb{C}^d}$" write "$k(z, z') := f(\langle z, z'\rangle_{\mathbb{C}^d})$"

- P150, l–1: replace "Furthermore, the" by "Furthermore, if (e_i) is an ONB of $L_2(\mu)$, then the"

- P160, (4.61): The correct formula is

$$\kappa(t) = \int_{\mathbb{R}} e^{-ty} \, d\mu(y), \qquad t \in [0, \infty). \qquad (4.61)$$

5. Infinite Sample Versions of Support Vector Machines

6. Basic Statistical Analysis of SVMs

- P217, l–9: replace "H be a separable Hilbert space H" by "H be a separable Hilbert space"

- P224, l–3: replace "$\|h(x,y)\Phi(x)\|_H$" by "$\|h(x,y)\Phi(x)\|_\infty$"

7. Advanced Statistical Analysis of SVMs (*)

- P285, L–1: instead of "$c_p\,a$" write "$c_p\,a^{\frac{1}{2}}$". Actually, the old result is also true since we assume $a \geq 1$, but the correction yields a better bound.

8. Support Vector Machines for Classification

9. Support Vector Machines for Regression

- P342 (9.18): instead of "$\mathcal{R}_{L,\mathrm{P}}(f)$" write "$\mathcal{R}_{L,\mathrm{P}}(f_{\mathrm{P},\lambda_n})$"

- P342, L–11: instead of "$\|f_{\mathrm{P},\lambda_n} - f_{\mathrm{D}_n,\lambda_n}\|_H \leq \varepsilon$" write "$\|f_{\mathrm{P},\lambda_n} - f_{\mathrm{D},\lambda_n}\|_H \leq \varepsilon$"

10. Robustness

- P382, L8: instead of "$g(y)$" write "$g(x)$"

- P383, L2: instead of "$\subset \mu_g(X_n)$" write "$\subset \mu(X_n)$"

11. Computational Aspects

- P419, formula line (11.29): instead of "$\alpha^{\mathsf{T}} K \alpha$" write "$\frac{1}{2}\alpha^{\mathsf{T}} K \alpha$"

12. Data Mining

Appendix

- P491, L22: "that" should be in new line

- P517, L–3: replace "H and $T \in \mathcal{K}(H)$" by "H_1, H_2 and $S \in \mathcal{K}(H_1, H_2)$"

- P523, L–4: instead of "with $f(x) < \infty$," write "with $f(w) < \infty$,"

- P526, L2: instead of "By Lemma A.6.14" write "By Proposition A.6.14"

References

- P557, L–3: instead of "On Propertiechristmann2004bs of" write "On Properties of"

- P558, L16: instead of "(tentatively accepted)" write "J. Mach. Learn. Res., 9, 915-936."

Notation and Symbols

Abbreviations

Author Index

Some page numbers differ from the correct value by 1 page.

Subject Index

Some page numbers differ from the correct value by 1 page.