

Errata for “Ridge Functions and Applications in Neural Networks”

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Page 1, line -9: Replace “multivariate function” with “bivariate function”.

Page 3, line 9: $n(\varepsilon, \mathcal{F}_d)$ should be $n(\varepsilon, d)$.

Page 3, line -11: This line should read as follows: “where $\mathbf{x} = (x_1, \dots, x_d) \in \mathbb{R}^d$ is the vector of input signals, $\mathbf{w} = (w_1, \dots, w_d) \in \mathbb{R}^d$ is the vector of synaptic weights...”

Page 5, line 20: $f(x_1, \dots, x_n)$ should be $f(x_1, \dots, x_d)$.

Page 9, line -10: After the sentence “...is not always possible” add the sentence “Here and in the sequel we assume that the functions g_i in the definition of this set belong to an appropriate normed space”.

Page 13, lines 13 and 14: S^{n-1} should be S^{d-1} .

Page 14, line 19: Since q may also equal ∞ , change “with the norm $\|f\|_q = (\int_I |f(x)|^q dx)^{1/q}$ ” to “with the standard L_q -norm”.

Page 15, line 5: \int_{B^n} should be \int_{B^d} .

Page 20, line 7: $(2, 1, 1, 1 - 1)$ should be $(-2, 1, 1, 1 - 1)$.

Page 26, line 11: Put the closing bracket “)” after “Section 1.1”.

Page 26, line -20: Delete the opening bracket “(” before “as”.

Page 31, line 12: \mathbf{b} should be \mathbf{a}^2 .

Page 32, line 8: \leq should be \geq .

Page 33, line -12: Put the closing bracket “)” after (1.22).

Page 41, Corollary 1.28: The second sentence should read: “Let W denote the set of all solutions of the wave equation

$$\frac{\partial^2 w}{\partial s \partial t}(s, t) = 0, \quad (s, t) \in \mathbb{R}^2,$$

restricted to D ”.

Page 47, line -5: $x \in X$ should be $\mathbf{x} \in X$.

Page 48, Eq. (1.50): $[g_2^0(\mathbf{x}^{2n+1}) - g_2^0(\mathbf{x}^{2n})]$ should be $[g_2^0(\mathbf{a}^2 \cdot \mathbf{x}^{2n+1}) - g_2^0(\mathbf{a}^2 \cdot \mathbf{x}^{2n})]$.

Page 50, line 1: a^2 should be \mathbf{a}^2 .

Page 54, line 8: $\omega_j(x)$ should be $\omega_j(\mathbf{x})$.

Page 62, line 7: “Chose any vector” should be “Choose any vector”.

Page 62, line -5: “ n times” should be “ k times”.

Page 64, line -3: “ $1, \dots, m$ ” should be “ $m = 1, \dots, k$ ”.

Page 66, line 13: Put the closing bracket “)” after “Lemma 2.6”.

Page 69, line 4: “By Lemma 2.2” should be “By Lemma 2.7”.

Page 86, line -4: Replace “the the above polynomial $P(\mathbf{x})$ ” with “the polynomial $P(\mathbf{x})$ in Theorem 2.13”.

Page 102, lines 17 and 18: r_3 and R_3 should be r_{3i} and R_{3i} , respectively.

Page 114, line -4: Remove “For example, ridge functions”.

Page 115, lines 17 and 19: $B(h_1, \dots, h_r; X)$ should be $\mathcal{B}(h_1, \dots, h_r; X)$.

Page 116, line -19: “...is a continuous functions” should be “...is a continuous function”.

Page 117, line 16: “fmily” should be “family”.

Page 117, line -11: Delete “and if f is continuous, then g can be chosen continuous as well”.

Page 118, line 9: “ $d \times n$ matrix” should be “ $n \times d$ matrix”.

Page 146, line 8: $i = 1, 2$ should be $i = 1, \dots, k$.

Page 147, line 19: In the formula containing \inf , f should be f_0 .

Page 148, line 14: \mathbb{R}^n should be \mathbb{R}^d .

Page 154, line 1: Delete “convex”.

Page 158, line 10 and page 159, line -5: “there exists” should be “there exist”.

Page 161, line -8: Replace “of the form (5.39)” with “of the form above (5.39)”.