

Erratum: Dimensionality Reduction for Supervised Learning with Reproducing Kernel Hilbert Spaces

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Editor: Chris Williams

An error is present in Proposition 4 in the Appendix in the original manuscript, where we incorrectly referred the proof to a result of Alpay (2001). Proposition 4 should be replaced by

Proposition 4 *Under the condition of Theorem 2, if there exists $C > 0$ such that*

$$E_{Y|X}[k_2(y_1, Y) | X = x_1]E_{Y|X}[k_2(y_2, Y) | X = x_2] \preceq Ck_1(x_1, x_2)k_2(y_1, y_2)$$

for all $x_1, x_2 \in \Omega_1$ and $y_1, y_2 \in \Omega_2$, then for all $g \in \mathcal{H}_2$ the conditional expectation $E_{Y|X}[g(Y) | X = \cdot]$ is an element of \mathcal{H}_1 , where $h(z_1, z_2) \preceq \ell(z_1, z_2)$ means that $\ell(z_1, z_2) - h(z_1, z_2)$ is a positive definite kernel.

and the remark after the proposition, “From this proposition, it is obvious that $E_{Y|X}[g(Y) | X = \cdot] \in \mathcal{H}_1$ holds, if the range of X and Y are bounded,” should be deleted.

Acknowledgments

We would like to thank Olivier Bousquet for pointing out this error.