



Correction: Learning with density matrices and random features

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Correction: Quantum Machine Intelligence (2022) 4:23
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The original online version of this article was revised: The authors noticed an error is in equation (7), proposition 2, page 3:

Incorrect Eq. -->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma N \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma N \epsilon)^2}{4(d+2)} \right)$$

Correct Eq. -->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma \epsilon)^2}{4(d+2)} \right)$$

The proof of the proposition in the Appendix on pages 15 and 16 has also been corrected:

Incorrect Eq. -->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma N \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma N \epsilon)^2}{4(d+2)} \right)$$

Correct Eq. --->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma \epsilon)^2}{4(d+2)} \right)$$

Incorrect Eq. -->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_\rho(x) - \hat{f}_\gamma(x)| \geq 3M_\gamma N \epsilon \right] \leq B$$

Correct Eq. --->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_\rho(x) - \hat{f}_\gamma(x)| \geq 3M_\gamma \epsilon \right] \leq B$$

Incorrect Eq. -->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma N \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma N \epsilon)^2}{4(d+2)} \right)$$

Correct Eq. --->
$$\Pr \left[\sup_{x \in \mathcal{M}} |\hat{f}_{\rho_{\text{train}}}(x) - \hat{f}_\gamma(x)| \geq \epsilon \right] \leq 2^8 \left(\frac{\sqrt{2d\gamma} \text{diam}(\mathcal{M})}{3M_\gamma \epsilon} \right)^2 \exp \left(-\frac{D(3M_\gamma \epsilon)^2}{4(d+2)} \right)$$

The original article has been corrected.

The original article can be found online at <https://doi.org/10.1007/s42484-022-00079-9>.

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