

Calculating entanglement entropy with generative neural networks

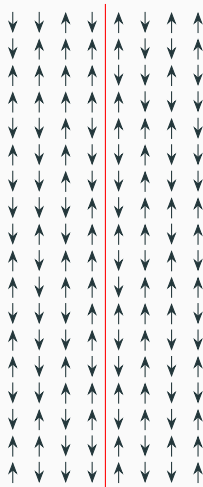
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Quantum 1D Ising

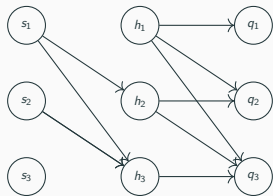
$$S_n(A) = \frac{1}{1-n} \log \text{Tr} \rho_A^n$$



Classical 2D Ising

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Autoregressive neural network



$$q_{\theta}(\mathbf{s}) = \prod_{i=1}^N q_{\theta}(s_i | s_1, \dots, s_{i-1})$$

Entropy as a function of the subsystem size

