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## Quantum Convolutional Neural Networks for Classification

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In this project, I investigate quantum convolutional neural networks (QCNNs) for quantum machine learning. The models are applied to binary classification tasks using subsets of the MNIST dataset for benchmarking, with simulations carried out on PennyLane devices. Different circuit encodings and optimization settings are tested, and parameter sweeps are performed to study how factors such as learning rate and batch size influence performance. The presentation will summarize the implementation, results, and potential relevance of QCNNs for physics-related applications.

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