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Applications on Quantum-inspired Convolutional Neural Networks

Quantum Convolutional Neural Networks (QCNNs) have emerged in recent years as a promising tool in the field of quantum machine learning. Numerous studies have demonstrated that QCNNs can achieve improved accuracy compared to their classical CNN counterparts in various tasks. However, it has recently been shown that QCNNs, when applied to classical data, are classically simulable, raising questions about their quantum advantage in such contexts. Nevertheless, QCNNs still remain a viable architecture for a wide range of applications, particularly in scenarios where their quantum properties can be effectively leveraged.

Group

CQTA

Project Category

B1. Physics data analysis and performance (software-oriented)

Special Qualifications

DESY Site

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