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Quantum-Assisted Learning for Convolutional Deep Belief Networks

The project aims to investigate whether adiabatic quantum computers can improve deep learning algorithms. Previous research focused on Boltzmann machines and related methods, but achieved little practical success due to limitations in existing quantum devices. We're developing a novel quantum-assisted (hybrid) learning algorithm for convolutional deep belief networks with the goal of overcoming some of these obstacles and enabling larger problems, particularly in vision, to be modeled.