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**Title: Machine learning for classification of entanglement**

**Abstract:**

The growing interest in employing machine learning methods in the context of quantum physics leads to the development of various methods for studying quantum phenomena. One of the key problems in quantum technologies that can be addressed by machine learning methods is entanglement detection. In this contribution, we present a method for solving the entanglement-separability classification problem based on machine learning with confusion method. We focus on an entanglement classifier for a GHZ state with the use of a depolarization channel to construct a dataset. We obtain a universal W-shape as the result of separation-entanglement recognition