

Colloquium

Classification of Tumor Metastasis Data by Using Quantum kernel-based Algorithms

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摘 要：

In this talk, we first introduce the method to classify data on tumor metastasis effectively by support vector algorithms. A few studies suggest that quantum support vector machine algorithms perform well in classification problems. If doctors can identify biomarkers to predict tumor metastasis accurately, it will be an essential step toward precision medicine. Second, we use both the SVM and QSVM classifiers; with the addition of a certain number of features, we can achieve excellent distinctions between patients with or without metastasis. It is a positive result for precision medicine studies. Finally, we evaluate the performance of quantum and classical algorithms in classifying tumor metastasis data. This is joint work with Tai-Yue Li, Venugopala Reddy Mekala and Ka-Lok Ng.

