Tensor Product Kernels for Independence*

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Abstract

Hilbert-Schmidt independence criterion (HSIC) is among the most widely-used approaches in machine learning and statistics to measure the independence of random variables. Despite its popularity and success in numerous applications, quite little is known about when HSIC characterizes independence. I am going to provide a complete answer to this question, with conditions which are often easy to verify in practice.

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†This is joint work with Bharath Sriperumbudur.