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Title: « Efficient online learning with Kernels for adversarial large scale problems »

Abstract:

In this talk, we will consider online nonparametric regression with arbitrary deterministic sequences. In this setting, a learner is asked to sequentially predict a sequence of outputs from an input vector and past information. We will be interested in low-dimensional but large-scale and potentially adversarial datasets. We will study the computational and theoretical performance of online variations of kernel Ridge regression. Despite its simplicity, the algorithm we study is the first to achieve the optimal regret for a wide range of kernels with a per-round complexity of order n^α with $\alpha < 2$.