Sketching strategies as NLA companion

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Abstract

In the past two decades randomization strategies called epsilon-subspace embeddings, in short sketchings, have been used to make classical numerical linear algebra (NLA) methods more economical, both in terms of memory allocations and energy consumptions. Indeed, thanks to its appealing metric preservation property, the underlying projection (embedding) can significantly reduce the dimension of the target space without sacrificing accuracy, in a probabilistic sense. Sketching strategies can be employed in different contexts, with different aims, acting as companion tool of well established deterministic methods. In this talk we present a few such instances.

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