ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO A GUEST LECTURE

Isotonic regression by dynamic programming

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Chaired by Andrei Asinowski | Department of Mathematics

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N.2.01

ABSTRACT

For a given sequence of n numbers, we want to find a monotonically increasing sequence of the same length that best approximates it in the sense of minimizing the weighted sum of absolute values of the differences. A conceptually easy dynamic programming approach leads to an algorithm with running time $O(n \log n)$. While other algorithms with the same running time are known, our algorithm is very simple. The only auxiliary data structure that it requires is a priority queue. The approach extends to other error measures.

We hope to see you there!