

Federated Calculation of the Transportation Barycenter by Dual Decomposition

We propose an efficient federated dual decomposition algorithm for calculating the Wasserstein barycenter of several distributions. The algorithm does not have access to local data and uses only highly aggregate information. Owing to the absence of any matrix-vector operations, the algorithm exhibits very low complexity of each iteration and significant scalability. We illustrate its virtues on several examples of mixture models.

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