Distributed SGD for matrix factorization

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Abstract—**Low-rank matrix factorization is an effective tool for discovering and analyzing the interactions between two given entities. It has been successfully applied in recommendation system (users and items) or news personalization (users and articles) [1]. In production systems, matrices with millions of rows and columns can be involved [2]. Therefore, efficient algorithms that approximate the solution in a reasonable time need to be implemented, often leveraging distributed computing [3], [2]. In this work, one such algorithm using distributed stochastic gradient descent is implemented and analyzed [1]. Moreover, a general analysis of distributed SGD behavior is presented [4], [5], [6], [7].**

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