Communication-Efficient Algorithms

Communication-efficient algorithms for distributed learning, e.g.,

- Approximate Newton's algorithms [1, 2, 3].
- Primal-dual algorithms [4].
- One-shot averaging [5].

Reference:

1. Shamir, Srebro, & Zhang: Communication efficient distributed optimization using an approximate Newton-type method. In *ICML*, 2014.
2. Wang and others: GIANT: Globally improved approximate newton method for distributed optimization. In *NIPS*, 2018.
3. Mahajan and others: An efficient distributed learning algorithm based on effective local functional approximations. *Journal of Machine Learning Research*, 2019.
4. Smith and others: CoCoA: A general framework for communication-efficient distributed optimization. *Journal of Machine Learning Research*, 2018.
5. Zhang, Duchi, & Wainwright: Communication-efficient algorithms for statistical optimization. *Journal of Machine Learning Research*, 2013.