

Clustering

bibliography list

The classical 2-approximation algorithm for k-center is due to Gonzales [3]. There are also other 2-approximation algorithms. The 5-approximation local search algorithm for k-median is due to Arya et al. [1]. The simpler analysis that I presented appears in [4]. Lloyd [5] algorithm is classical and variations of it are described and used in many places. See for example the recent survey [2].

References

- [1] Vijay Arya, Naveen Garg, Rohit Khandekar, Adam Meyerson, Kamesh Munagala, and Vinayaka Pandit. Local search heuristics for k-median and facility location problems. *SIAM J. Comput.*, 33(3):544–562, 2004.
- [2] Johannes Blömer, Christiane Lammersen, Melanie Schmidt, and Christian Sohler. Theoretical analysis of the k -means algorithm - A survey. *CoRR*, abs/1602.08254, 2016.
- [3] Teofilo F. Gonzalez. Clustering to minimize the maximum intercluster distance. *Theoretical Computer Science*, 38:293 – 306, 1985.
- [4] Anupam Gupta and Kanat Tangwongsan. Simpler analyses of local search algorithms for facility location. *CoRR*, abs/0809.2554, 2008.
- [5] S. Lloyd. Least squares quantization in pcm. *IEEE Transactions on Information Theory*, 28(2):129–137, Mar 1982.