

# Recent advances in landmark-based scalable spectral clustering

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**Abstract:** Spectral clustering has emerged as a very effective clustering approach; however, it is computationally very expensive. As a result, there has been considerable effort in the machine learning community to develop fast, approximate spectral clustering algorithms that are scalable to large data. Notably, most of those methods use a small set of landmark points selected from the given data. In this talk we present two new landmark-based scalable spectral clustering algorithms that are developed based on novel document-term and bipartite graph models. We demonstrate the superior performance of our proposed algorithms by comparing them with the state-of-the-art methods on some benchmark data sets. Finally, we provide a unified view of all the old and new landmark-based spectral clustering methods.