Lecture 17 Outline:

1. Review $K$-means Clustering.

2. Hierarchical Clustering.
   - Agglomerative vs. Divisive.
   - Agglomerative linkage types:
     (a) Single.
     (b) Complete.
     (c) Average.
     (d) Ward’s.
   - Example dendograms.

3. Choosing the number of clusters for Hierarchical: Tree cutting.

   - Cluster Heatmap.
   - SVD-based methods.

5. Introduction to Convex Clustering & Biclustering.

6. Introduction to Spectral Clustering.