Basic Concepts of Density-Based Clustering

Density-Based Clustering Methods

❑ Clustering based on density (a local cluster criterion), such as density-connected points

❑ Major features:

  ❑ Discover clusters of arbitrary shape

  ❑ Handle noise

  ❑ One scan (only examine the local region to justify density)

  ❑ Need density parameters as termination condition

❑ Several interesting studies:

  ❑ <u>DBSCAN</u>: Ester, et al. (KDD'96)   To be covered in this lecture

  ❑ <u>OPTICS</u>: Ankerst, et al (SIGMOD'99)   To be covered in this lecture

  ❑ <u>DENCLUE</u>: Hinneburg & D. Keim (KDD'98)

  ❑ <u>CLIQUE</u>: Agrawal, et al. (SIGMOD'98) (also, grid-based)   To be covered in this lecture

2