

Cluster Analysis

——Types of Data in Cluster Analysis——

徐华

清华大学 计算机系 智能技术与系统国家重点实验室 xuhua@tsinghua.edu.cn

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- What is Cluster Analysis?
- Types of Data in Cluster Analysis
- A Categorization of Major Clustering Methods
- Partitioning Methods
- Hierarchical Methods
- Density-Based Methods
- Grid-Based Methods
- Model-Based Clustering Methods
- Outlier Analysis
- ₂ Summary



Major Clustering Approaches



- <u>Partitioning algorithms</u>: Construct various partitions and then evaluate them by some criterion
- Hierarchy algorithms: Create a hierarchical decomposition of the set of data (or objects) using some criterion
- <u>Density-based</u>: based on connectivity and density functions
- Grid-based: based on a multiple-level granularity structure
- Model-based: A model is hypothesized for each of the clusters and the idea is to find the best fit of that model to each other

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