

# Major Issues in Data Mining

- Major issues in data mining research, partitioning them into five groups: mining methodology, user interaction, efficiency and scalability, diversity of data types, and data mining and society.
- Many of these issues have been addressed in recent data mining research and development to a certain extent and are now considered data mining requirements; others are still at the research stage.
- The issues continue to stimulate further investigation and improvement in data mining.

# Major Issues in Data Mining

- Mining Methodology
  - Mining various and new kinds of knowledge
  - Mining knowledge in multi-dimensional space
  - Data mining: An interdisciplinary effort
  - Boosting the power of discovery in a networked environment
  - Handling noise, uncertainty, and incompleteness of data
  - Pattern evaluation and pattern- or constraint-guided mining

# Major Issues in Data Mining

- User Interaction
  - Interactive mining
  - Incorporation of background knowledge
  - Ad hoc data mining and data mining query languages
  - Presentation and visualization of data mining results

# Major Issues in Data Mining

- Efficiency and Scalability
  - Efficiency and scalability of data mining algorithms
  - Parallel, distributed, stream, and incremental mining methods

# Major Issues in Data Mining

- Diversity of data types
  - Handling complex types of data
  - Mining dynamic, networked, and global data repositories

# Major Issues in Data Mining

- Data mining and society
  - Social impacts of data mining
  - Privacy-preserving data mining
  - Invisible data mining