

Major issues in Data Mining :-

1) Mining methodology and user-interaction issues :- These select the kinds of Knowledge mined, the ability to mine Knowledge at multiple granularities, the use of domain Knowledge, ad-hoc mining, and Knowledge visualization.

Mining different Kinds of Knowledge in databases :-

Since different users can be interested in different Kinds of Knowledge, data mining should cover a wide spectrum of data analysis and Knowledge discovery tasks, including data characterization, discrimination, association, classification, clustering, trend and deviation analysis and similarity analysis.

Interactive mining of Knowledge at multiple levels of abstraction:-

Since it is difficult to know exactly what can be discovered within a database, the data mining process should be interactive. For databases containing a huge amount of data, appropriate sampling technique can first be applied to facilitate interactive data exploration.

Incorporation of background Knowledge

Background Knowledge, or information regarding the domain under study, may be used to guide the discovery process and allow discovered patterns to be expressed in concise terms and at different levels of abstraction.

Domain Knowledge related to databases, such as integrity constraints and deduction rules, can help focus and speed up

a data mining process, or judge the interestingness of discovered patterns.

Data mining query languages and ad-hoc data mining:

Relational query languages (such as SQL) allow users to pose ad-hoc queries for data retrieval. In a similar vein, high-level data mining query languages need to be developed to allow users to describe ad-hoc data mining tasks by facilitating the specification of the relevant sets of data for analysis, the domain knowledge, the kinds of knowledge to be mined, and the conditions and interestingness constraints to be enforced on the discovered patterns. Such a language should be integrated with a database or data warehouse query language, and optimized for extensible data mining.