Discuss data mining tasks

The data mining tasks can be classified generally into two types based on what a specific task tries to achieve.

- Descriptive tasks the general properties of data whereas predictive data mining tasks perform inference on the available data set to predict how a new data set will behave.
- Predictive tasks perform inference on the available data set to predict how a new data set will behave.

Tasks can either be descriptive or predicitive eg:

- Predictive modeling: the process of using historical data to make predictions about future events. This can involve techniques such as regression analysis, decision trees, and neural networks.
- Association rule mining: the process of discovering interesting relationships between variables in a dataset. This is commonly used in market basket analysis to identify items that are frequently purchased together.
- Clustering: the process of grouping similar data points together based on their attributes. This is used to identify segments of the population or to discover previously unknown relationships within the data.
- Anomaly detection: the process of identifying data points that are significantly different from the rest of the dataset. This is used to identify potential fraud or other unusual events.
- Sequence analysis: the process of analyzing patterns in sequential data, such as time series data or event logs. This can be used to identify trends or predict future events.
- Text mining: the process of analyzing large volumes of unstructured text data to extract meaningful insights. This can be used for sentiment analysis, topic modeling, and named entity recognition.