What is Data Mining and It’s Importance

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Data mining is the process of searching through data to find hidden connections and predict future trends. The process combines statistics, artificial intelligence, and machine learning. The technology keeps evolving to keep pace with the limitless potential of big data and affordable computing power. Over the last decade, advances in processing power and speed have enabled us to move beyond manual, tedious and time-consuming practices to quick, easy and automated data analysis. The more complex the data sets collected, the more potential there is to uncover relevant insights.

In 1983 Michael C. Lovell was one of the first to post an article about data mining, Lovell and some other renowned economists believed this method could lead to wrong conclusions. By the 90s, the concept of extracting value from data and forming patterns had gained popularity. In the year 1996, Teradata, NCR, and another set of companies executed a project that led to standardizing of data mining technologies. This work comprised of CRISP-DM process, which stands for Cross Industry Standard Process for Data Mining. The entire process was split into six steps: Business understanding, data understanding, data preparation, modeling, evaluation, and deployment.

The industries that are using data mining are very diverse, some are insurance companies, education systems, manufacturing, banking, retail, and technology based businesses. While the benefits and processes vary across each industry and type of organization, the essence of data mining remains the same – searching, discovering, and tracking patterns and the unique relationships between them. Predictive analytics are a central component of data mining, since decisions about future events can be more easily identified. Data mining, with the use of telematics technology, also known as GPS fleet management and vehicle tracking, covers vast topics, including safety, productivity, optimization, to compliance.