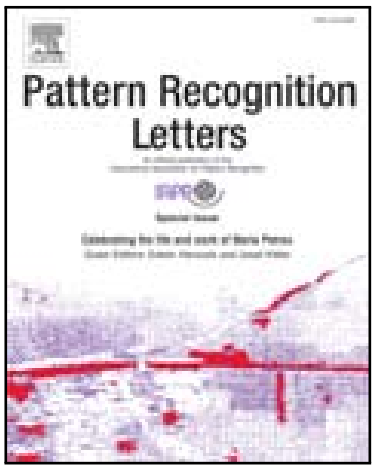

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1. Introduction

The ever-increasing amount of readily available data makes the use of automatic tools unavoidable. Enterprises, public organisations, and a wide variety of customers feel the need to search for hide patterns behind the raw data. Their goal may be very different, enterprises may want to know about the behaviour of potential clients to refine offers and increase benefits. Health related public organisations may be interested in detecting some kind of prevalence and evolution of diseases in order to either prevent or palliate their effects on the population. Organisations involved in education may want to find new technologies better adapted to the capabilities and life style of individuals in order to improve learning. Data Mining is defined as the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems. The goal of data mining is to extract useful information, mainly patterns among subsets of data, that could be further used for tasks such as prediction or classification.

Data Mining involves many different techniques for pre-processing, analysing and interpreting data. These techniques fall mainly in two fields: Pattern Recognition and Machine Learning. The goal of pattern recognition is the identification of implicit objects and relations, i.e., the extraction of patterns from the input data. These techniques are mainly related with image analysis although this is not the only kind of application. Machine Learning techniques are mainly applied to extract generalised knowledge from data (including images) that will be further used for predictive tasks. Machine learning techniques can be classified according to the