Abstract

Data mining is a growing field of research that intersects with many other fields such as Artificial Intelligent, Statistics, Visualization, Parallel Computing and Image Processing. Data mining techniques are good for Brain MRI image classification that can diagnose brain tumor and other diseases. In this paper we present an overview of the current research being carried out using the data mining techniques for the diagnosis of brain tumor. The goal of this study is to identify the most well performing data mining algorithms used on medical brain MRI and Clinical parameters. The following algorithms have been identified: Decision Trees, Support Vector Machine, Artificial Neural Networks and their Multilayer Perceptron model, and Fuzzy C-Means. Analyses show that it is very difficult to name a single data mining algorithm as the most suitable for the brain tumor detection or classification. At times some algorithms perform better than others, but there are cases when the properties of some of the above mentioned algorithm are combined together, they provide effective result. This paper also provides a critical evaluation of the literature reviewed, which reveals new facets of.
Automated Brain Tumor Detection in Medical Brain Images and Clinical Parameters using Data Mining Techniques: A Review

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**Index Terms**

Computer Science | Artificial Intelligence

**Keywords**
| MRI Brain Images | Feature Extraction | Neural Network | Support Vector Machine (SVM) | Fuzzy C-Means |