Abstract

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A Random Forest Model for Mental Disorders Diagnostic Systems

Data mining has established new applications in medicine over the last few years. Using mental disorders diagnostic systems, data possession, and data analysis has been of enormous succor for clinicians to recognize diseases more precisely, especially when dealing with overlapping mental symptoms. In this study, random forests used to predict a number of mental disorders and drug abuse. Two datasets were used, the first dataset consists of substances abuse patients derived from United States, and the second dataset consists of psychotic patients collected from Egypt. Random Forest classification technique was used to increase the accuracy rate of mental disorders prediction systems. The exploratory data mining analysis produced two models of the random forest algorithm with two groups of patients at different risks for substances abuse and psychotic diseases. This study presents a new data mining approach to enhance the diagnosis of mental disorders. This approach also serves therapeutic interventions.