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Alzheimer's Disease Detection using Machine Learning Techniques in 3D MR Images

Dr. R. V. Babar[1], Piyusha Kadam[2], Akash Harishchandre[3], Saylee Giri[4], Deepa Dixit[5]
HOD, Department of Information Technology[1]
Students, Department of Information Technology[2,3,4,5]
Sinhgad Institute of Technology, Lonavala, Maharashtra, India

Abstract: *Alzheimer disease is one of the most common and fastest growing neurodegenerative diseases in the western countries. Development of different biomarkers tools are key issues for diagnosis of Alzheimer disease and its progression. Prediction of cognitive performance of subjects from EEG and identification of relevant biomarkers are some of the research problems. EEG signal analysis can be well suited for automated diagnosis of Alzheimer's disease. Although, EEG based techniques are helpful in screening of Alzheimer and dementia; still there is a scope of improvement in terms of diagnostic accuracy, sensitivity and specificity. Thus, many issues are still left out in field of Alzheimer diagnosis using EEG signals related to the choice of features which can help in distinguishing the two or more subjects. This focuses on new features for diagnosis of Alzheimer's disease using EEG signals with effective increase in diagnostic accuracy. The use of new complexity- based features is proposed in this paper which increases the diagnostic accuracy and helps in early Alzheimer's diagnosis.*

Keywords: Neurodegenerative, Cognitive, Dementia, EEG, Diagnostic

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