Abstract

With nearly 100,000 cases in Algeria, Alzheimer's disease (AD) represents a major public health problem. Therefore, several different automated methods have been developed to assist clinicians in their diagnosis. We propose here a method based on binary support vector machines (SVM) to distinguish between patients with Alzheimer disease (AD), patients with mild cognitive impairment (MCI) and elderly control subjects (CS) from magnetic resonance imaging (MRI) data. In order to reduce the total computation time, we used the JADE (Java Agent DEvelopement Framework) multi-agent platform. The results obtained show the efficiency of our method and the significant advantages of the parallelization.

References

comparison of ten methods using the ADNI database”, NeuroImage, 6 (2): 766-781.

- D. Chyzyhk & A. Savio. (2010) "Feature Extraction from Structural MRI Images Based on VBM: Data from OASIS Database”, Technical Report GIC-UPV-EHU-RR-2010-10-14, Grupo de Inteligencia Computacional UPV/EHU.
- D. Chyzyhk & A. Savio. (2010) "Feature Extraction from Structural MRI Images Based on VBM: Data from OASIS Database”, Technical Report GIC-UPV-EHU-RR-2010-10-14, Grupo de Inteligencia Computacional UPV/EHU.

Index Terms

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Keywords

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