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Recognition of Alzheimer’s Disease and Mild Cognitive Impairment with multimodal image-derived biomarkers and Multiple Kernel Learning

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Abstract

Computer-Aided Diagnosis (CAD) of Alzheimer’s disease (AD) has drawn the attention of computer vision research community over the last few years. Several attempts have been made to adapt pattern recognition approaches to specific neuroimaging data such as Structural MRI (sMRI) for early AD diagnosis. One strategy is to boost the discrimination power of such approaches by integrating complementary imaging modalities in a single learning framework. Diffusion Tensor Imaging (DTI) is a new and promising modality giving complementary information to the anatomical MRI. However, including relevant DTI information from such modality is a challenging problem. In this paper, we propose to extract local image-derived biomarkers from DTI and

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