

Brain Structures Segmentation by using Statistical Models

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Abstract:

Background: Automatic segmentation of brain structures is a fundamental step for quantitative analysis of images in many brain's pathologies such as Alzheimer's, brain's tumors or multiple sclerosis. The goal of our work is to implement an automatic brain's structures segmentation method, to evaluate its use in computer aided diagnosis tools, and to compare their performances.

Methods: The proposed method consists of the segmentation of brain's structures that uses the active shape models (ASM) and active appearance models (AAM) techniques.

Results: The experimental results demonstrate the superiority of method AAM over the other method ASM.

Conclusion: In this paper, we have evaluated and compared two methods using several comparison criteria, to identify the best one. After several performance measures, we can conclude that the AAM is better than the ASM.

Keywords:

Brain Structures, Active Shape Models (ASM), Active Appearance Models (AAM), Automatic Segmentation, Computer Aided Diagnosis.

1. Declaration of conflicts

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2. Authors' biography

No biography

3. References

No references