DEEP LEARNING-BASED AUTOMATIC ULTRASOUND IMAGE RECOGNITION AND DIAGNOSIS SYSTEM

ABSTRACT

The present invention relates to the technical field of ultrasound medical treatment, and discloses a deep learning-based automatic ultrasound image recognition and diagnosis system. The system comprises a multi-modal image acquisition module collecting multiple original images covering an organ to form an original image sequence; an image preprocessing module preprocessing the original images; an image fusion module splicing and fusing multiple frames of images, filling gas-occluded parts with unoccluded areas, and generating a complete structural image of the organ; an evaluation and feedback module calculating the occlusion residual rate of the complete structural image of the organ and determining whether it meets diagnostic requirements; and a recognition and diagnosis module identifying lesion areas and generating a diagnostic report. The system solves the problem of gas occlusion in ultrasound images.

FIG. 1