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A Character Detection Method for Ancient Yi Books Based on Connected Components and Regressive Character Segmentation

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Abstract : Character detection is an important issue for character recognition of ancient Yi books. The accuracy of detection directly affects the recognition effect of ancient Yi books. Considering the complex layout, the lack of standard typesetting and the mixed arrangement between images and texts, we propose a character detection method for ancient Yi books based on connected components and regressive character segmentation. First, the scanned images of ancient Yi books are preprocessed with nonlocal mean filtering, and then a modified local adaptive threshold binarization algorithm is used to obtain the binary images to segment the foreground and background for the images. Second, the non-text areas are removed by the method based on connected components. Finally, the single character in the ancient Yi books is segmented by our method. The experimental results show that the method can effectively separate the text areas and non-text areas for ancient Yi books and achieve higher accuracy and recall rate in the experiment of character detection, and effectively solve the problem of character detection and segmentation in character recognition of ancient books.

Keywords : CCS concepts, computing methodologies, interest point, salient region detections, image segmentation
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