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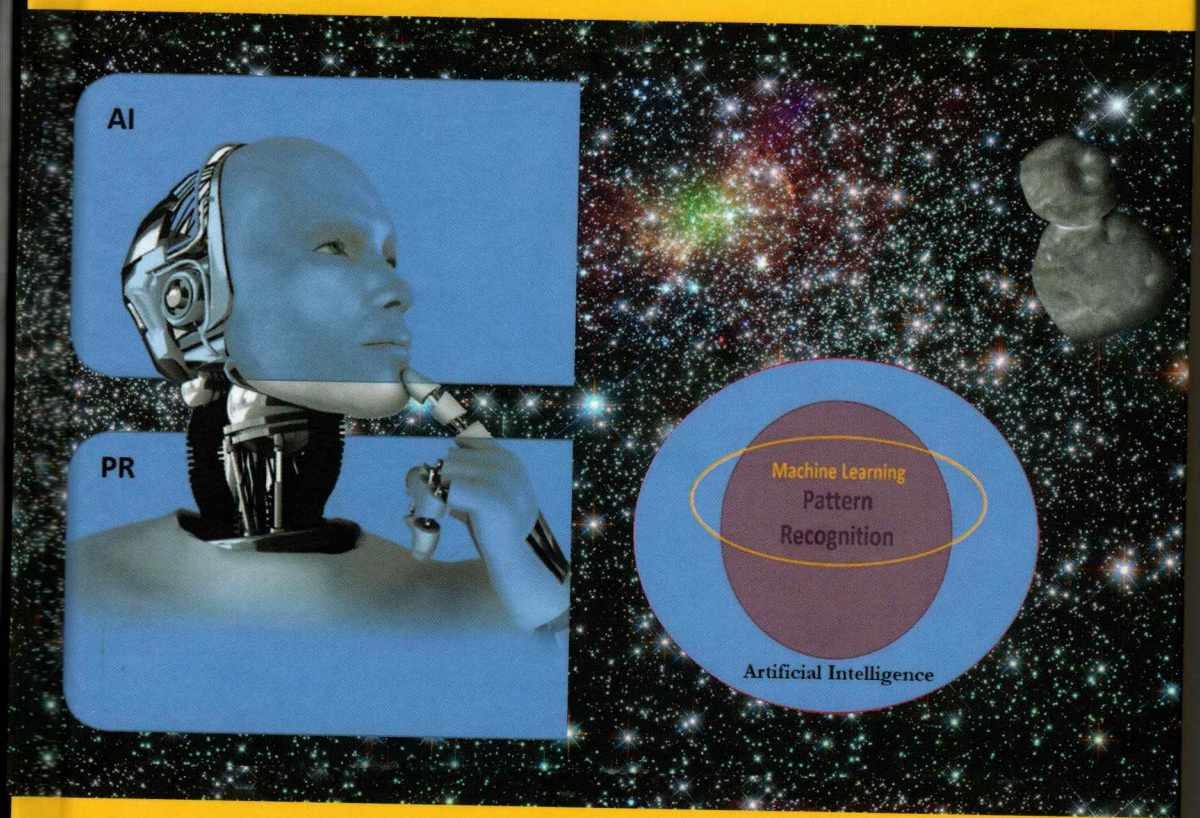

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Contents

Chapter 6

Improving Chinese Writer Identification by Fusion of Text-dependent and Text-independent Methods

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A novel method for Chinese writer identification is proposed in this paper, which takes advantage of both text-independent and text-dependent characteristics. The contour-directional features were extracted from a whole image. They were used to calculate the text-independent similarity between the query and reference handwriting images. Meanwhile, character pairs, appearing in both the query and reference handwriting images, were utilized for computing the text-dependent similarity. We propose an effective method to measure the similarity of character pairs. It is rooted from image registration. The displacement field used to align two characters was calculated by the Log-Demons algorithm, and was utilized for a similarity measurement. The final similarity between the query and reference handwriting images is the fusion of text-independent and text-dependent similarities. The best Top-1 accuracy on the HIT-MW and CASIA-2.1 datasets reached 97.1% and 98.3% respectively, which outperformed other previous approaches.