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Nota di contenuto	COMPUTER-AIDED INTELLIGENT RECOGNITION TECHNIQUES AND APPLICATIONS; Contents; Preface; List of Contributors; 1. On Offline Arabic Character Recognition; 1. Introduction; 2. Structure of the Proposed OCR System; 3. Preprocessing; 4. Segmentation; 4.1 Line Segmentation and Zoning; 4.2 Word Segmentation; 4.3 Segmentation of Words into Individual Characters; 5. Feature Extraction; 6. Recognition Strategy; 6.1 Recognition Using the Syntactic Approach; 6.2 Recognition Using the Neural Network Approach; 7. Experimental Results and Analysis; 7.1 System Training; 7.2 Experimental Set-up 7.3 Results Achieved8. Conclusion; Acknowledgement; References; 2. License Plate Recognition System: Saudi Arabian Case; 1. Introduction; 2. Structure of a Typical LPR System; 3. Image Acquisition; 4. License Plate Extraction; 4.1 Vertical Edge Detection; 4.2 Filtering; 4.3 Vertical Edge Matching; 4.4 Black to White Ratio and Plate Extraction; 5. License Plate Segmentation; 6. Character Recognition; 6.1 Normalization; 6.2 Template Matching; 7. Experimental Analysis and Results; 8. Conclusion; References; 3. Algorithms for Extracting Textual Characters in Color Video; 1. Introduction 2. Prior and Related Work3. Our New Text Extraction Algorithm; 3.1

Step 1: Identify Potential Text Line Segments; 3.2 Step 2: Text Block Detection; 3.3 Step 3: Text Block Filtering; 3.4 Step 4: Boundary Adjustments; 3.5 Step 5: Bicolor Clustering; 3.6 Step 6: Artifact Filtering; 3.7 Step 7: Contour Smoothing; 4. Experimental Results and Performance; 5. Using Multiframe Edge Information to Improve Precision; 5.1 Step 3(b): Text Block Filtering Based on Multiframe Edge Strength; 6. Discussion and Concluding Remarks; References

4. Separation of Handwritten Touching Digits: A Multiagents Approach1. Introduction; 2. Previous Work; 3. Digitizing and Processing; 4. Segmentation Algorithm; 4.1 Extraction of Feature Points; 4.2 The Employed Agents; 5. Experimental Results; 6. Conclusions and Future Work; References; 5. Prototype-based Handwriting Recognition Using Shape and Execution Prototypes; 1. Introduction; 2. A Handwriting Generation Process Model; 3. The First Stages of the Handwriting Recognition System; 3.1 Character Segmentation; 3.2 Feature Extraction; 4. The Execution of the Prototype Extraction Method

4.1 Grouping Training Samples4.2 Refinement of the Prototypes; 4.3 Experimental Evaluation of the Prototype Extraction Method; 5. Prototype-based Classification; 5.1 The Prototype-based Classifier Architecture; 5.2 Experimental Evaluation of the Prototype Initialization; 5.3 Prototype Pruning to Increase Knowledge Condensation; 5.4 Discussion and Comparison to Related Work; 6. Conclusions; Acknowledgement; References; 6. Logo Detection in Document Images with Complex Backgrounds; 1. Introduction; 2. Detection of Potential Logos; 3. Verification of Potential Logos

3.1 Feature Extraction by Geostatistics

Sommario/riassunto

Intelligent recognition methods have recently proven to be indispensable in a variety of modern industries, including computer vision, robotics, medical imaging, visualization and the media. Furthermore, they play a critical role in the traditional fields such as character recognition, natural language processing and personal identification. This cutting-edge book draws together the latest findings of industry experts and researchers from around the globe. It is a timely guide for all those require comprehensive, state-of-the-art advice on the present status and future potential of intelligence
