



**electronics**



*Special Issue Reprint*

## **Advances in Computer Vision and Deep Learning and Its Applications**

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The aim of this Reprint is to immerse the reader in the latest findings regarding image-processing technology. Currently, image-processing technology is at the core of artificial intelligence, with the aim being to design computer programs that can achieve or mimic human-like intelligence in terms of perception and inference in the real world. With the rapid development of visual sensors and imaging technologies, image analysis and pattern recognition techniques have been extensively applied in various artificial-intelligence-related fields, ranging from industry and agriculture to surveillance, social security, and beyond. Up to now, image-processing technology based on deep learning has rapidly developed and become the most successful applied intelligent technology. Pattern recognition is an important research field in image processing and includes image preprocessing, feature extraction and selection, classifier design, and classification decisions. This Reprint covers advancements in ten research directions: computer vision; feature extraction and image selection; pattern recognition for image-processing techniques; image processing in intelligent transportation; neural networks; machine learning and deep learning; biomedical image processing and recognition; image processing for intelligent surveillance; deep learning for image processing, robotics, and unmanned systems; and AI-based image processing, understanding, recognition, compression, and reconstruction.



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