





Special Issue Reprint

Applications of Computer Vision, 2nd Edition

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The objective of this reprint is to immerse the reader in the latest advances in computer vision, where leading experts share their insights, research findings, and challenges for the future using images or videos for inspection applications. The research works included use data collected using a wide range of technologies, such as unmanned aerial vehicles (UAVs), remote sensing, color camaras, and X-rays. In terms of objectives, they cover inspection tasks such as vehicle detection or identification, traffic sign detection, automatic QR code classification, defect or target detection in images, and contraband control through small-object detection or image classification. Other applications include image segmentation, image quality enhancement, or face recognition. The last topic discusses the issue of race and gender biases in deep learning for facial recognition. Our goal is to uncover the potential and promise of state-of-the-art methods, such as popular deep learning techniques based on convolutional neural networks (CNNs) and You Only Look Once (YOLO) architectures, by offering an exhaustive comparison between the proposed algorithms and the state-of-the-art methods. This Special Issue paves the way to a future where computer vision can assist or facilitate tedious inspection tasks normally performed by humans.





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