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PINTEREST LABS

This research mainly focuses on developing a method to automatically detect and localize text in natural scenes, useful for better interpreting the important contextual information which could significantly assist the independent travel of blind or visually impaired persons. To retrieve the necessary text information in the wild, text spotting (from text localization to word recognition) approaches have been extensively explored and developed in last decades. Since text included in the natural scene images usually varies in appearances, layouts, font types, sizes and styles, the localization and recognition procedure inevitably suffers from uneven illumination, occlusions, distortion, orientations, deformation, noise, and, in addition, the false-positive detections due to the cluttered background. All the above restrictions make text spotting a way more challenging research problem than OCR on printed document. We aim to approach the problem of *text localization in cluttered conditions* by drawing on recent successful developments in deep learning and neural networks. The proposed text localization architecture could effectively and efficiently localize the potential text regions in the natural scenes, and provide well aligned text patches in consecutive frames for following recognition process.