

QR Code Detection

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Abstract: Due to the incorrect image collecting approach, QR code identification frequently confronts obstacles such as uneven backdrop fluctuations, inadequate illuminations, and distortions. As a result, identifying QR codes is difficult, and artificial intelligence-based methods were developed to address this challenge. This article uses an improved adaptive median filter technique and a QR code distortion correction method based on backpropagation (BP) neural networks to increase the identification rate of QR image codes. The distorted QR image can be fitted into the geometric deformation pattern using this combination of artificial intelligence methods, and QR code identification is possible. This paper addresses two-dimensional code distortion, which has been a critical research topic in present software systems. The research findings, which focused on the picture preprocessing step, demonstrated a significant improvement of 14 percent in the reading rate of QR image codes following processing using the system algorithm described in this article. The artificial intelligence technique used improves the recognition rate of the two-dimensional code image to some extent.

Keywords: QR codes

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