机器视觉系统超分辨率图像准确识别方法研究

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摘　要：为了能够准确识别超分辨率图像，提出了一种基于图像重构的神经网络图像识别方法.这种超分辨率图像识别方法采用 Gamma 方法去除机器视觉系统超分辨率图像中的无用信息，根据超分辨率图像的阈值对图像进行分割，并提取超分辨率图像的特征，重构分割后的超分辨率图像，利用 Hopfield 神经网络实现对机器视觉系统超分辨率图像的识别.仿真实验结果证明，所提方法能够对机器视觉系统超分辨率图像进行准确识别，并且识别效率高、速度快.

关键词：机器视觉系统；超分辨率；图像识别

Research on the method of super-resolution image recognition in machine vision system

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Abstract：In order to accurately identify super-resolution images, a neural network image recognition method based on image reconstruction is proposed. This super-resolution image recognition method uses Gamma method to remove the useless information in the super-resolution image of the machine vision system. The image is segmented according to the threshold of the super-resolution image, and the features of the super-resolution image are extracted, and the segmented image is reconstructed. Super-resolution image, using the Hopfield neural network to realize the super-resolution image recognition of machine vision system. The simulation experiment results show that the proposed method can accurately recognize the super-resolution image of the machine vision system, and the recognition efficiency is high and the speed is high.

Key words：machine vision system;super resolution;image identification

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