Communicated by Dr Chenchen Liu

Accepted Manuscript

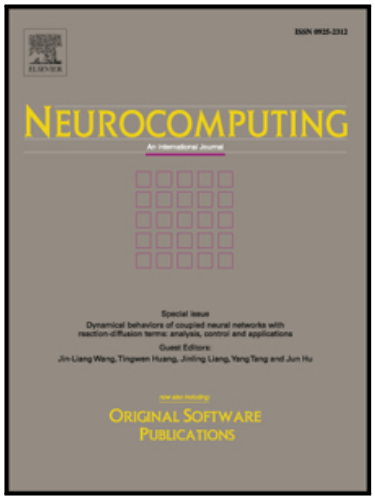

Image Super-Resolution via a Densely Connected Recursive Network

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PII: S0925-2312(18)30914-7
DOI: https://doi.org/10.1016/j.neucom.2018.07.076
Reference: NEUCOM 19830

To appear in: *Neurocomputing*

Received date: 28 December 2017
Revised date: 2 June 2018
Accepted date: 19 July 2018

Please cite this article as: Zhanxiang Feng, Jianhuang Lai, Xiaohua Xie, Junyong Zhu, Image Super-Resolution via a Densely Connected Recursive Network, *Neurocomputing* (2018), doi: https://doi.org/10.1016/j.neucom.2018.07.076

Image Super-Resolution via a Densely Connected Recursive Network

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Abstract

The single-image super-resolution techniques (SISR) have been significantly promoted by deep networks. However, the storage and computation complexities of deep models increase dramatically alongside with the reconstruction performance. This paper proposes a densely connected recursive network (DCRN) to trade off the performance and complexity. We introduce an enhanced dense unit by removing the batch normalization (BN) layers and employing the squeeze-and-excitation (SE) structure. A recursive architecture is also adopted to control the parameters of deep networks. Moreover, a de-convolution based residual learning method is proposed to accelerate the residual feature extraction process. The experimental results validate the efficiency of the proposed approach.

Keywords: `Image Super-Resolution`, `Deep Learning`, `Enhanced Dense Unit`, `Recursive Structure`, `Residual Learning`

1. Introduction

Single image super-resolution (SISR) refers to the process of recovering high-resolution (HR) images from low-resolution (LR) inputs. With the increasing

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