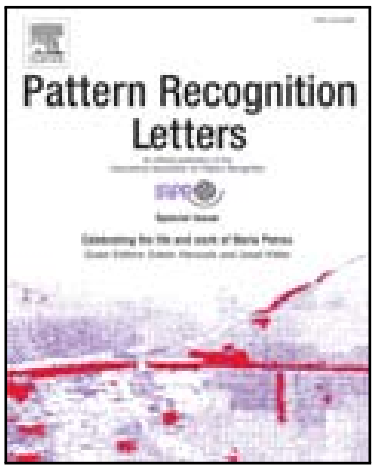
Accepted Manuscript



Convolutional Neural Networks for Wavelet Domain Super Resolution

Neeraj Kumar, Ruchika Verma, Amit Sethi

PII: S0167-8655(17)30087-9
DOI: 10.1016/j.patrec.2017.03.014
Reference: PATREC 6770

To appear in: *Pattern Recognition Letters*

Received date: 2 August 2016
Revised date: 8 March 2017
Accepted date: 16 March 2017

Please cite this article as: Neeraj Kumar, Ruchika Verma, Amit Sethi, Convolutional Neural Networks for Wavelet Domain Super Resolution, *Pattern Recognition Letters* (2017), doi: 10.1016/j.patrec.2017.03.014

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- Proposed a super resolution method with higher reconstruction accuracy than before.
- Cast super resolution as a problem of estimating sparse wavelet detail coefficients.
- Estimated sparse wavelet coefficients using a convolutional neural network (CNN).
- Trained our CNN with fewer samples than the one used for estimating pixels directly.
- Concluded that it is better to estimate wavelet coefficients rather than pixels.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/4969988

Download Persian Version:

https://daneshyari.com/article/4969988

Daneshyari.com