Abstract

This work presents Wavelet-Modified Single Layer Linear Forward Only Counter Propagation Network (MSLLFOCPN) technique to solve image compression. In this technique, it inherits the properties of localizing the global spatial and frequency correlation from wavelets. Function approximation and prediction are obtained from neural networks. As a result counter propagation network was considered for its superior performance and the research enable us to propose a new neural network architecture named single layer linear counter propagation network (SLLC). The combination of wavelet and SLLC network were tested on several benchmark images and the experimental results shows that an enhancement in picture quality, compression ratio and approximation or prediction comparable to existing and traditional neural networks.

**Index Terms**

Computer Science | Neural Networks

**Key words**

Wavelet | Modified Single
Layer Linear | Forward Only Counter propagation
Clustering
Distance Metrics