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Wavelet filter banks in a local weather forecast system

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Rainfall is one of the most important events in daily life of human beings. During several decades, scientists have been trying to characterize the weather, current forecasts are based on high complex dynamic models (ensembles). In this paper is presented a local rainfall forecast system based on wavelet Time Series analysis and of Neural Networks. After several year taking data, a subjective local model has been automated by this system in different stages. This work is focused to explain the wavelet filters (MOWDT and CWT). This filtering stage obtains the pressure waves at appropriate scales and trains the neural classifier. As a result it allows detecting the upcoming of warm and cold fronts.