



## **Local Rainfall Forecast System based on Time Series Analysis and Neural Networks**

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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. In this paper is presented a local rainfall forecast system based on Time Series analysis and Neural Networks. This model tries to complement the currently state of the art ensembles, from a locally historical perspective, where the model definition is not so dependent from the exact values of the initial conditions. After several years taking data, expert meteorologists proposed this approximation to characterize the local weather behaviour, that is automated by this system. The current system predicts rainfall events over Valladolid within a time period of a month with a twelve hours accuracy. The different blocks of the system is explained as well as the work introduces how to apply the forecast system to prevent economical impact hazards produced by rainfalls.