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# High resolution nowcasting with generative classifiers

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n this work different generative and discriminative classifiers has been compared to analyze the classification problem of local forecast, nowcast and diagnosis. The Bayesian networks is a generic probabilistic framework for the three problems, which are able to take into account the spatial relationships among the different locations and the atmosphere state.

This study has been carried out over a local area with 42 locations in the north of the Iberian Peninsula, and the precipitation variable based on extreme and normal events was used. The quality measurement is based on the Relative Operating Characteristics (ROC) area. ROC is used to evaluate the different classifiers: naive, augmented and generic, in the three classification problems: forecast, nowcast and diagnosis.

In this work is been showed that the spatial dependencies are less useful in the case of the forecasting given an estimation of the atmosphere state (i.e. numerical weather prediction), but for nowcasting these dependencies are important.