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Analysis of the RFSI interpolation method for the precipitation variable in Spain

Spatial interpolation methods offer the ability to obtain the regional spatial distribution of a variable from local measurements, as long as there is a sufficient density of observatories to do so. It should be noted that the interpolation process takes into account the terrain factors that influence the variable within the study region. In this way, representative values are obtained for each point in a given region, allowing for a complete graphical representation.

The precipitation variable has a large spatial variability even between relatively close points due to local geographic effects and, in turn, this variability can vary depending on the time of year in a seasonal precipitation regime. Therefore, it is necessary to apply interpolation methods that assess the relationship of predictors to the prediction in each specific case. This study presents the analysis of the Random Forest Spatial Interpolation (RFSI) method applied to the precipitation variable in a study area covering the Iberian Peninsula and the Balearic Islands. For this purpose, the "meteo" library developed for R is used. The results obtained by using different combinations of predictor variables are evaluated. In addition, the results are compared with other benchmark interpolation techniques, such as the generalised linear fit model.

¿Presentas la comunicación a premio?

Premio estudiante (grado, máster, doctoral)

Afiliación (del autor)

Fundación para la Investigación del Clima

Autor primario: GALIANO SÁNCHEZ, Lorena (Fundación para la Investigación del Clima)

Coautores: Sr. PRADO LÓPEZ, Carlos (Fundación para la Investigación del Clima); Sr. REDOLAT NEGRO, Darío (Fundación para la Investigación del Clima); Sr. ROYÉ, Dominic (Fundación para la Investigación del Clima); Sr. MONJO, Robert (Fundación para la Investigación del Clima)

Presentador: GALIANO SÁNCHEZ, Lorena (Fundación para la Investigación del Clima)

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