Artificial Intelligence applied to calculate the risk of a social exclusion

What need was solved?
The social services of Castilla y León (CyL) regional goverment needed (1) a set of mathematical models and useful algorithms for population segmentation, with the purpose of determining the intensity of attention required according to the complexity of the global situation and the risk of chronification. Also, (2) a set of mathematical models and useful algorithms to identify the belonging of people and families to specific risk groups of poverty and social exclusion, which are susceptible to differentiated attention strategies. Finally, (3) an ontology of social services.

What services were provided?
UPM provided the social services of CyL with a responsive web that allows social workers to calculate the risk of a social exclusion case to become chronic through a smartphone. A web service accessible from the social services software applications was also given. The web service allows checking with the predictive model every social patient introduced in the services databases. The use of machine learning paradigms makes possible a high precision in predicting chronic social exclusion through this digital service, around 90% in the most conservative predictions.

The relation with digitization
The fight against social exclusion is at the heart of the Europe 2020 strategy: 120 million people are at risk of suffering this condition in the EU. Risk prediction models are widely used in insurance companies and health services. However, the use of these models to allow an early detection of social exclusion by social workers is not a common practice.

Customer
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