

Practice abstract 04

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The use of Text Mining in PoliRural

PoliRural combines survey research with innovative text mining techniques that are both rigorous and versatile. Text mining uses complex algorithms and cutting-edge technologies such as Artificial Intelligence and Machine Learning to detect patterns in vast amounts of text.

In PoliRural, text mining is extensively used at one of the foresight stages called current situation analysis. PoliRural's innovative approach enhances text mining results by blending them with those of Foresight and System Dynamic Modeling. This allows a more in-depth analysis to be undertaken in the 12 pilot areas, as the focus is not limited to the present but also covers possible future developments.

It should also be noticed that the use of text mining in PoliRural has some challenges, as follows:

- **Multilingual inputs:** The prototype solution was built around documents in English and in the later stages of the project will be adapted to regional contexts and languages, which is a challenging task, taking into consideration linguistic differences;
- **Semantic Discrepancies:** regardless of the results of model training, there will always be discrepancies in the human understanding of certain concepts and a machine estimation of those concepts;
- **Monitoring and maintenance:** the creation of the text mining solution for PoliRural is an iterative process not only in terms of its development, but also its usage. The solution will need constant monitoring and maintenance.

