



A Reading Robot? How Innovative Text Mining Techniques Support the Federal Government decision-making process

Navigating the Future Waters of Public Administration

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This proposal stems from a collaborative project between a Canadian federal department and a group of academic researchers located in different universities in Canada. The project's main objective is to promote the development of new analytical methods to process huge amount of structured and unstructured data in a timely fashion, resulting into synthetic reports offering periodic overview of departmental activities. Different innovative approaches, falling into the realm of data mining and artificial intelligence, are considered in this project.

According to Kwartler (2018), human activities produce a larger set of unstructured data than structured data that we call texts. This paper proposes to explore how text mining techniques (which are part of data mining and artificial intelligence), can be used by public administrations to process unstructured data. More specifically, after discussing how basic text mining can offer a quick overview of processed unstructured data, this paper will test the hypothesis that automated document classification and predictive modelling techniques (part of the text mining techniques family) can be used to support the federal government decision-making process and improve relations with different stakeholders.

Furthermore, this paper will show how text mining can be performed using an open access data analysis language called R, and will discuss the benefits for a public administration of using R instead of other proprietary languages. This paper will report on the results of an experiment that will have been conducted to confirm our hypothesis. Finally, this paper will conclude with critical remarks on limitations of such techniques that need to be taken into consideration.