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ARTIFICIAL INTELIGENCE APPLICATIONS IN SOCIAL SCIENCES

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ABSTRACT

This mini-symposium aims to cover artificial intelligence applications in different areas of social sciences such as finance, risk modelling and management, natural language processing, marketing, customer relationship management, social networks analysis, and other related fields. We are witnessing an exponential increase in available data in recent years. Mining the Web is one of the standard ways to obtain data for useful information patterns. Sentiment analysis, which combines techniques of natural language processing, text analysis and computational linguistics, is widely used for efficient analysis of *voice of the customer* materials such as reviews, survey responses, and social media in order to identify and quantify subjective information such as opinions and feelings of persons (customers). Recently, natural language processing has found important applications in customer support chatbots, relying on the fact that most customers would rather connect with the company via live chat than via email or social media. Artificial intelligence "infected" financial industry too. AI methods showed applicability and efficiency in different areas such as derivatives pricing using neural networks, financial portfolio optimization, credit scoring, fraud detection, algorithmic trading, robo-advisory, personalized banking experience etc.

But, there are also serious problems on the horizon. An important problem is that while the quantity of data available on World Wide Web is enormous and is getting bigger, the Web is fragmenting and the quality of available data is falling. This makes standard search engines less effective than before. Part of the reasons for Web deterioration is political economy of the Web dominated by Big Tech. Even Wikipedia, once viewed as a relatively unbiased source of information, is fast losing the reputation when it comes to topics related to social sciences. As a result, novel approaches in natural language processing are needed capable of addressing the challenges posed by the rapidly changing environment. Another important issue related to applications of machine learning and AI in social sciences is the need for education in which social science education and technical and modeling skills needed for machine learning and AI are integrated into a coherent whole. Such integrative approach to education is essential if we are to form, as a society, informed decisions in a world dominated by Big data and AI.