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Big Data Analytics for Risk Factor Surveillance

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Abstract

Background: Risk factor surveillance is a conənuous data collecəon, analysis, and disseminaəon acəvity. Informaəon technology plays an important role in building the surveillance system and a big data approach has become a hot topic. Big data analyəcs are the advanced methods to derive insight and knowledge from the big data of high volume, speed and variety, such as text mining, natural language processing, and arəficial intelligence. They can handle a large amount of untradiəonal and unstructured data and thus provide innovaəve ways for conducəng the risk factor surveillance. Purpose: The purpose of this study is to explore the possible applicaəon of current big data analyəcs in the risk factor surveillance.

Study/Intervenəon Design: Literature review

Methods: This study examined the definiəon, feature, and present use of current big data analyəcs and then linked them with the risk factor surveillance. Results: Current big data analyəcs were analysed including text analyəcs (senəment analyəcs and social data analyəcs are part of it), web analyəcs, sensor analyəcs, geospaəal analyəcs, video analyəcs, and audio analyəcs. The text analyəcs analyses free text data, so it allows e ciently collecəng and analysing informaəon from internet. Web analyəcs provides a way to look at web surfing behaviours. Geospaəal analyəcs facilitates locaəon analysis. Sensor analyəcs makes it possible to use self-tracking devices and environment monitors in surveys. Video analyəcs and audio analyəcs may allow us to use new methods to conduct surveys.

Conclusion: Big data analyəcs can be applied to the risk factor surveillance. They provide new data sources and innovaəve ways to conduct surveys.

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