 ISBN: 9789073592421

IPS Paper

The Fourth Industrial Revolution and The new Data Eco-System

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Submission ID: 1043

Reference Number: 1043

Presentation File

abstracts/ottawa-2023_8900be934b2ca642ac2b1b70f6dea783.pdf

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The Fourth Industrial Revolution and The new Data Eco

Brief Description

This session is a panel discussion on Data Science and Statistics: Challenges and opportunities for Official Statistics within the ISI.

The ISI Data Science Special Interest group organizes the panel discussion with the aim to highlights various opportunities and challenges of Data Science within ISI communities

Abstract

The Fourth Industrial Revolution is described as the exponential growth of several key technological fields' concepts, such as intelligent materials, cloud computing, cyber-physical systems, data exchange, the Internet of things, and blockchain technology. At its core, data represents a post-industrial opportunity. The effects of technologies have provided new avenues of data for official statistics, which can then be harnessed through the power of data science. However, as data continue to grow in size and complexity; new algorithms need to be developed so as to learn from diverse data sources. The limitation of conventional statistics in managing and analyzing big data has inspired data analysts to venture into data science. Data Science is a combination of multiple disciplines that use statistics, data analysis, and machine learning to analyze data and extract knowledge and insights from it. These swathes of new digital data are valuable for official statistics. This paper links various industrial eras to the evolution of data and Statistics.