Editorial

Applying Big Data Analytics and Cloud Computing Model in a Variety of Sectoral Contexts

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In his recent book, Vignesh Prajapati (2013) conceptualised Big Data Analytics as the 'process of examining large amounts of data of a variety of types to uncover hidden patterns, unknown correlations, and other useful information.' What was not explicit in Prajapati's book is the almost limitless application of Big Data Analytics in a variety of sectoral contexts. This special edition of the International Journal of Knowledge, Innovation and Entrepreneurship, published jointly with the International Journal of Developments in Big Data and Analytics, capture this essence of Big Data Analytics and its wide, contextual application.

We begin this issue with a paper by Asma Sattar, Faria Nazir, Faiza Kiani and Muhammad Fahad Khan, which focuses cloud computing and the security concerns of organisations adopting the cloud computing model. The paper highlights a number of the cloud security issues and proposes a model designed to firm up the security of the cloud more secure.

The Sattar et al's paper is followed by that of Victor Waziri, John Alhassan, Olalere Morufu and Idris Ismaila. This third paper explores Big Data Analytics and its implementation in the Cloud Computing Environment vis-à-vis the *Fully Homomorphic Encryption Scheme* (FHA), a computational algorithm that allows the computations on encrypted data. Their paper concludes by highlighting the application of the Homomorphic Encryption Scheme with capacity to 'bootstrap cloud-based businesses and e-governance in developing economies.

The later paper is followed by that of Dominique Heger. Dominique examines very extensively the current trends in Big Data Analytics in particular and IT in general, pointing out that the Big Data and Hadoop ecosystems and Cloud Computing continue to evolve. And that 'organizations are moving beyond questions such as what and how to store towards deriving meaningful and timely analytics from their data to interactively respond to real business scenarios.' His line of argument is that many Big Data projects require a substantial amount of server systems that can only be made possible or delivered through cloud Computing or Analytics as a Service (AaaS).

Irina Neaga's and Yuqiuge Hao's present a 'holistic analysis of the main challenges of exploring big data that has recently emerged especially due to the application of new digital technology such as social networking systems, electronic business applications among others.' Their paper describes the background of big data and cloud computing

cloud computing paradigm to enable the development of big data mining applications, business intelligence and analytics.

The fifth paper by Mathew Nwanga, Elizabeth Onwuka, Abiodun Aibinu and Osichinakao Ubadike explores how big data can be used to 'generate investigative lead and electronically gather intelligence for combating terrorism in Nigeria through analysis of the dark web portal.' The paper concludes by proposing an indicative framework for Big Data Analytics and national security in Nigeria.

The sixth paper in this special edition of the journal examines the concepts of predictive analytics, critical elements in operationalising predictive analytics and the main issues for consideration in the predictive analytics project. The paper concludes that once the predictive technology has been installed, a hypothetical testing is required on the particular data sets to enable the organisation to develop and refine its model/s and apply it to the problem that needs to be solved. Such a step-by-step approach should help organisation to learn from any 'initial' mistakes while taking on board best practice in predictive analytics project.

Reference

Prajapati, V. (2013) *Big Data Analytics with R and Hadoop*, Packt Publishing: Birmingham, UK.