EDITORIAL

Challenges and Outcomes Using Big Data as a Service

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Big Data as a Service (BDaaS) encompasses software, data warehousing, infrastructure, and platform service models to deliver advanced analysis of large data sets, generally through a cloud-based network. It is a solution-based system designed to provide organizations with wide-ranging capabilities to gain insights from data. With a rapidly growing amount of data, businesses require advanced technologies to harness the power of data science effectively. These convergent technological trends will significantly redefine business applications for both e-business and more traditional sectors such as manufacturing or logistics. As enterprises acquire the opportunity to store and analyze gigantic amounts of data, ranging from detailed customer behavior traces to demographic shifts of clientele in emerging markets, they play a significant role in creating novel business opportunities. Further, it helps them to disparate data to drive insights through which the businesses can make efficient decisions and create a competitive advantage. Practically, big data services are most important for business applications, not just because the data is big but also because its potential or impact is tremendous. Despite the advantages, the major challenge in dealing with big data applications is that it requires more innovative technological solutions that replace traditional databases with more scalable architectures. This is where big data as a service (BDaaS) can make a difference for business applications. BDaaS has been commercialized and implemented in many business platforms. The cloud infrastructure required to use BDaaS is provided by both Microsoft Azure and Google BigQuery, which are both data services. The cloud data lake, data warehousing, and data sharing are located on top of the data services layer. Their purpose is to offer the analytics and sharing bridges that lead to end-user analytics.

BDaaS solutions implementations take entire business IT platforms to the next level. They integrate various software services and apply them to massively large data-sets in turn helping organizations meet evolving needs faster, more accurately and more cost-effectively. Furthermore, offloading data management across BDaaS platforms provides more internal capacity for business development. With BDaaS, businesses are no longer associated with their local servers and storage systems. It enables them to securely store their data and access it across remote locations, such that they can efficiently collaborate with their business partners and extract important business insights to drive their business. In the short term, BDaaS enables access to business data from anywhere in the world and at any time. So that businesses of all kinds and sizes, particularly E-business applications, can acquire maximum benefit from using BDaaS tools. Some of the considerable advantages include seamless data access, easier setup, remote collaboration, data crash protection, improved financial reporting, cost-effectiveness, and providing more advanced insights for various business improvements. An e-business application can regularly

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track user activities without compromising security and implement the extracted insights in a meaningful way to acquire benefits in offering more advanced services to the end-users.

This special issue explores the advances in BDaaS to enhance the customer relationship measures across the entire spectrum of business applications. The special issue saw a total of 10 submissions, from which 2 papers are published. It was intentional to adhere to a strict acceptance rate (20%) and ensure that only the best papers in the scope of the special issue were accepted. The following few paragraphs summarize the contributions that our special issue collection presents.

In "Financing Decisions and the Role of CSR in Donation-Based Crowdfunding – Evidence from Pakistan and Indonesia", Usman et al. investigate the association between fundraisers in donation-based crowdfunding activities, which becomes a potential Corporate Social Responsibility (CSR) activity. Donation-based crowdfunding and corporate social responsibility activities have potential symbiotic ramifications to raise funds, but campaigners confront challenges and competition to accomplish their charitable target. For example, CSR activities could warrant the possibility of using crowdfunding to raise money. On the other hand, a company's CSR objectives can be achieved by using crowdfunding to micro-fund various social initiatives. This paper contributes to the donation-based crowdfunding literature to develop a vivid understanding of different CSR activities and their impact on the project's success. The work in this paper is one of the first to examine the significance of CSR activities and how it may enrich the body of knowledge regarding crowdfunding in diverse economies.

In "Dynamic Circular Network-Based Federated Dual-View Learning for Multivariate Time Series Anomaly Detection", Zhang et al. look into multivariate time-series data and how it exhibits intricate correlations in both temporal and spatial dimensions. Existing network architectures often overlook dependencies in the spatial dimension and struggle to strike a balance between long-term and short-term patterns when extracting features from any data. Furthermore, industries within the business community are hesitant to share their raw data, which hinders anomaly prediction accuracy and detection performance. To address these challenges, the authors proposed a dynamic circular network-based federated dual-view learning approach. Experimental results on four open-source datasets demonstrate that the presented method outperforms existing methods in terms of accuracy, recall, and F1-score for anomaly detection.