Open Access

Open Journal of Big Data (OJBD)
Volume 1, Issue 1, 2015

www.ronpub.com/journals/ojbd
ISSN

Introductory Editorial

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ABSTRACT

The Open Journal of Big Data is a new open access journal published by RonPub, and RonPub is an academic publisher of online, open access, peer-reviewed journals. OJBD addresses aspects of Big Data, including new methodologies, processes, case studies, poofs-of-concept, scientific demonstrations, industrial applications and adoption. This editorial presents the two articles in this first issue. The first paper is on An Efficient Approach for Cost Optimization of the Movement of Big Data, which mainly focuses on the challenge of moving big data from one data center to other.The second paper is on Cognitive Spam Recognition Using Hadoop and Multicast-Update, which describes a method to make machines cognitively label spam using Machine Learning and the Naive Bayesian approach. OJBD has a rising reputation thanks to the support of research communities, which help us set up the First International Conference on Internet of Things and Big Data 2016 (IoTBD 2016), in Rome, Italy, between 23 and 25 April 2016.

TYPE OF PAPER AND KEYWORDS

Editorial: open access, *OJBD, Open Journal of Big Data, first issue, RonPub*

1 INTRODUCTION

The Open Journal of Big Data (OJBD) [8] is a new publication in the emerging field of Open Access journals. It will present high-quality, scholarly papers describing new methodologies, processes, case studies, poofs-of-concept, scientific demonstrations, industrial applications and adoption relating to big data. The publisher of OJBD is RonPub [9], which publishes online, open access, peer-reviewed scholarly journals. RonPub aims to provide a platform for researchers, developers, educators, and technical managers to share and exchange their research results worldwide.

OJBD covers a wide range of topics including big data science, frameworks, analytics, visualizations, recommendations and data-intensive research. For example, Healthcare storage cloud was designed and implemented to backup and archive terabytes of medical data across private clouds. Experiments were conducted to identify challenges for data-intensive research [3]. Business intelligence as a service [1] was designed and deployed to ensure that a large scale of simulations can be computed to model and monitor the status of risk and return in real time [1]. In the modern era of Big Data, new services, algorithms, methods and proofs-of-concept are largely welcome to blend both theory and practice together. These include the use of pioneering approaches as identified in [1-3][6-7][11] and also two selected articles for this introductory issue [4-5]. The focus of the journal is how Big Data can make major positive impacts to different disciplines in addition to IT, such as healthcare, business, education, and the sciences. Our work on big data, business process modelling for data analytics, and cloud data security have made significant impact in research on big data and analytics [2][6-7][11].

2 CONTENT OF THE FIRST ISSUE

This is the first issue of Open Journal of Big Data (OJBD). It contains two articles. The first article is "An Efficient Approach for Cost Optimization of the Movement of Big Data" [5]. It addresses emerging challenges for data transfer. Advances in data collection and storage, together with reductions in cost mean the volume of data being generated, stored and updated is increasing rapidly. From time to time, such as when an organization decides to migrate to the cloud, it is necessary to move or replicate these datasets. However, the amount of data involved is large enough to make these operations problematic. This article is considers the challenge of moving big data between data centres. Such movements need to take into account a number of factors, including bandwidth, storage capacities, placement strategies and cost.

The second article is "Cognitive Spam Recognition Using Hadoop and Multicast-Update" [4]. It concerns cognitive spam recognition, the second movement of big data in the cloud. Unsolicited messages continue to be a problem for nearly all users of connected systems and services. These messages, commonly known as spam, typically carry advertisements and promotions and most are benign, although a small proportion are dangerous as they carry viruses and other malicious code or are attempts at cybercrime such as identity theft. A large proportion of all messages are unsolicited and it is commonly estimated that more than 80% of all messages are spam. This means they don't just irritate users, they also consume significant amounts of system resources. Filters designed to identify and delete unwanted messages are in widespread use but as senders' attempts to disguise unsolicited messages become ever more sophisticated, they are losing their effectiveness. This article describes cognitive spam recognition which improves detection by sharing knowledge and understanding of the characteristics of genuine and spam messages amongst the systems in a network. The article describes a cognition algorithm which uses multicast update and a second which uses map-reduce. An analysis and comparison with standard methods is presented for each along with results of simulations of both in operation.

3 LOOKING FORWARD

The OJBD has been managed and reviewed by a board of international experts in Big Data and related areas such as Cloud Computing, Internet of Things, Artificial Intelligence and Software Engineering. The quality of the papers, the management of the vigorous reviews and the impact to the international research communities have been and will be in one of the best in Big Data. The Editor-in-Chief is Dr. Victor Chang, who has successfully blended international workshops and conferences with OJBD and other leading journals. The Senior Editors are Dr. Muthu Ramachandran, Dr. Robert John Walters and Dr. Gary Brian Wills, who have significant experience in research and development over 25 years. OJBD has a rising reputation thanks to the support of research communities. We will host the second international workshop on Enterprise Security, in Vancouver, Canada, between 30 November and 3 December 2015. We will set up the First International Cofnerence on Internet of Things and Big Data 2016 (IoTBD 2016) in Rome, Italy, between the 23rd and 25th of April, 2016 [10]. Extension of selected papers will be published in our forthcoming special issues of OJBD. We always seek the best papers in different areas of Big Data. We seek the best practices, recommendation, innovation, prototype, algorithms, large scale experiments and simulations and proofs-of-concept for Big Data. We look forward to meeting you in Rome!

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AUTHOR BIOGRAPHIES

Dr. Victor Chang received his research MPhil from the University of Cambridge, UK and his PhD from University of Southampton, UK. He is a Senior Lecturer at Leeds Beckett University. He is the founding chair of two international workshops and one of which has been upgraded into an International Confernece on Internet of Things and Big Data (IoTBD). He has over 70 peer-reviewed publications. He is the Editor-in-Chief of two journals, including Open Journal of Big Data (OJBD). He is an Editor of Future Generation Computer Systems (FGCS). He has successfully delivered many projects and services and has won several awards. He gave several keynote talks including CLOSER/WEBIST/ICTforAgeingWell 2015. He is regarded as a leading academic and practitioner in Cloud Computing and Big Data in Europe.

Dr Muthu Ramachandran is a Principal Lecturer in the Computing, Creative Technologies, and Engineering School at Leeds Beckett University, UK. Muthu is an author & co-author of books on Software Components: Guidelines and Applications (Nova Publishers, NY, USA, 2008) and Software Security Engineering: Design and Applications (Nova Publishers, NY, USA, 2011). He has also widely authored and published 7 books, over 100s of journal articles, over 50 book chapters and over 200 conferences papers on various advanced topics in software engineering, software security, cloud computing and education. He is a member of IEEE and ACM, Fellow of BCS, a Senior Fellow of HEA and a Senior Editor of OJBD.

Dr. Robert John Walters received his PhD from the University of Southampton. He is a Lecturer in Computer Science at the University of Southampton. His research interests include distributed computing, and graphical formal modelling languages. He is a Senior Editor of OJBD.

Dr. Gary Wills, BEng, PhD, CEng is an Associate Professor at the University of Southampton. Gary's research projects focus on System Engineering and is underpinned by technologies such as, Secure Systems, Distributed Systems, SOAs and Cloud Computing. He is a Senior Editor of OJBD.