Guest Editors' Introduction

PAJAIS special issue on Business Intelligence and Analytics Research

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Business intelligence and analytics (BI&A) have been studied increasingly in the past 10 years by almost every business discipline. BI&A provide historical, current, and predictive views of business operations based on advanced data collection, extraction, integration, and analysis of large data sets to improve decision making. Web 2.0 has created an abundance of user-generated content (UGC) from online social media such as forums, online groups, web blogs, social networking sites, social multimedia sites, and even virtual worlds. "Big Data" and "Big Data Analytics" have been used to describe the data sets and analytical techniques in applications that are so large (from terabytes to exabytes) and complex (from sensor to unstructured social media data) that they require advanced and unique data storage, management, analysis, and visualization technologies.

Information system (IS) discipline, traditionally, has studied how to provide the *right* information, to the *right* person, at the *right* time, and in the *right* format to support decision making. With advanced BI&A research and systems that study and implement (big) data analytics, IS discipline can achieve a higher goal in meeting the information needs in businesses. BI&A have already analyzed data integrated from multiple sources in a variety of formats (e.g., structured and unstructured) to provide the *right* information. With the increasing use of mobile devices such as smart phones and tablets, BI&A research should study how to support mobile-oriented, location-aware, person-centered, and context and culture-relevant information. Although academic research on mobile BI is still in its earlier stage, BI&A 3.0 systems, which are mobile and sensor-based, are foreseen in the near future not only to provide the *right* information, but also to the *right* person, at the *right* time, and to the *right* location/device. In addition, BI&A research on the interface design of mobile devices and data visualization should meet 'in the *right* format' requirement to empower decision makers' visual sensemaking and thinking.

Obviously, social media and user-generated content associated with big data era create many data management and analytics challenges; however, they also provide a unique opportunity to the IS community. In facing these challenges, we believe IS researchers have a unique foundation in conducting BI&A research.

After PACIS 2014 held in Chengdu, China, Professor Ting-Peng Liang, Editor-in-Chief of Pacific Asia Journal of the Association for Information Systems (PAJAIS), invited us to edit a special

issue on Business Intelligence and Analytics research by soliciting papers from PACIS 2014 Business Intelligence and Big Data Analytics track. We identified and invited four papers for this special issue. After the review and revision, two papers were accepted for this special issue. The first paper entitled "The Identification of Noteworthy Hotel Reviews for Hotel Management," by Hwang et al., studies how to identify features that are relevant to the noteworthiness of hotel reviews and propose a method to automatically identifying noteworthy reviews for hotel managers. It is BI&A research in analyzing user-generated content (i.e., online customer reviews in this work) with text mining and sentiment analysis techniques. The second paper entitled "Combining Online News Articles and Web Search to Predict the Fluctuation of Real Estate Market in Big Data Context," by Sun et al., proposes and validates an integrated method on the prediction of real estate price in China by integrating the sentiment series extracted from both news data and search engine query data into the forecasting model. It is BI&A research by integrating data from multiple sources for the real estate price prediction. We hope that the insights of these two papers help IS researchers better understand how to apply BI&A research and technology in related industry areas.

About Guest Editors

Dr. Roger Chiang is a Professor of information systems at Department of Operations, Business Analytics, and Information Systems, Carl H. Lindner College of Business, University of Cincinnati. Dr. Chiang's research interests are in business intelligence and analytics, data and knowledge management, and intelligent systems. He has over fifty refereed articles published by conferences and journals including *ACM Transactions on Database Systems, ACM Transactions on Management Information Systems, Communications of the ACM, The DATA BASE for Advances in Information Systems, Data & Knowledge Engineering, Decision Support Systems, Journal of American Society for Information Science and Technology, Journal of Database Administration, Journal of Management Information Systems*, *Marketing Science, MIS Quarterly,* and *Very Large Data Base Journal*.

He has served as the senior editor of *The DATA BASE for Advances in Information Systems, Decision Sciences*, and *Journal of the Association of Information Systems*, and associate editor of *Information & Management, Journal of the Association of Information Systems, Journal of Database Management, International Journal of Intelligent Systems in Accounting, Finance and Management,* and *MIS Quarterly*. He co-edited with Professors Hsinchun Chen and Veda Storey a special issue on Business Intelligence Research for *MIS Quarterly,* published in December 2012.

Dr. Zhe (Jay) Shan is currently an Assistant Professor in Department of Operations, Business Analytics, and Information Systems in the Lindner College of Business at the University of Cincinnati. He earned his Ph.D. degree in Business Administration and Operations Research from Penn State University Smeal College of Business in 2011. His research interests include business process intelligence, big data analytics, and service science. He has published papers in ACM Transaction on Management Information Systems, IEEE Transaction on Engineering Management, and the Journal of Database Management. His papers have also been nominated for best paper awards in AMCIS, WITS and HICSS. He is a member of AIS and INFORMS.

Harry Jiannan Wang is an Associate Professor of Management Information Systems (MIS) and JPMorgan Chase Fellow in the Lerner College of Business and Economics, University of

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