

Editorial Preface

Inaugural Issue

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In the last decade, data analytics has grown to be a promising and one of the most important new scientific fields involving many disciplines including statistics, computing science, mathematics, intelligence science, economics and finance, and other practical fields in science, engineering, the public sector and business. Most of the world recently swooned over new technological evolutions such as artificial intelligence, the Internet of Things, machine learning and automation. Whatsoever, data analytics is the common kernel to all these emerging technologies.

The International Journal of Data Analytics (IJDA) covers a wide range of the above fields. The authors strive to answer research questions such as: What are the data analytical problems? What are the appropriate algorithms to solve them? How different are they from previous ones? How effective are they? How do these ideas apply to problems in other fields?

We are glad to see there have been a number of good papers submitted to us. Because the time is very limited for us to finish the first issue, we picked the following five papers from the diverse fields, which have pertinently answered the above questions.

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The first article, “SBASH Stack Based Allocation of Sheer Window Architecture for Real Time Stream Data Processing,” is devoted to the appropriate size of window selection, which is vital for stream data processing. In order to manage streams of data, the SBASH architecture is proposed to determine a unipartite size of sheer window. The sheer window can reduce the overall latency of data stream processing by a certain extent. The window is allocated and retrieved in a stack-based manner, which is helpful in reducing the number of comparisons made during retrieval.

The second article, “A High Level Interactive Query Language for Big Data Analytics Based on a Functional Model,” presented a high-level query platform for querying the Big Data type information systems. To deal with massive data, their system is intended to be used in a parallel and distributed environment according to the MapReduce paradigm. The results of the tests conducted show a better scalability of HLQL-BDA against large volumes of data when the size of clusters increases.

The third article, “Data collection and analyses applying unmanned helicopter (UAV) remote sensing to survey water chestnut invasive species,” applied UAV technology to perform rapid data collection and to predict coverages of water chestnut invasive species along the lower Erie Canal in the United States, then to assess the effectiveness of the physical removal by US Fishery and Wildlife Services. The results indicate that the physical removal of water chestnut by US-FWS was very effective.

The fourth article, “Data Science Techniques in Knowledge-Intensive Business Processes- A Collection of Use Cases for Investment Banking,” presents concrete use cases for front office processes of an investment bank as how knowledge management techniques can be used. The paper describes how expert systems can be used in the due diligence review or how fuzzy logic systems help in deciding whether to buy or sell securities. The article serves researchers as well as practitioners as an application overview of data science techniques in the example area of knowledge-intensive banking processes.

The fifth article, “Commercial Bank Digital Paradigms and Customer Response in Use,” analyzed the collected data to know the impact of digital banking services and the customer responses. The researcher has done an inferential analysis followed by descriptive analysis, recognizing factors, which were embraced amid the examination included; privacy, reliability, technology, convenience, security, and satisfaction.

SUMMARY

These discussions with great diversity answer the questions in an interdisciplinary and multidisciplinary arena with an expansive set of knowledge, skills and approaches. In summary, the goal of this journal is to crystallize the emerging data analytics technologies and trends into positive efforts to the most promising solutions. It is also believed that the papers and the coming ones will further research new practices and methods in this emerging field.

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