

# Guest Editorial Preface

## Special Issue on Semantic Computing in Web Data Analytics

Paramartha Dutta, Visva-Bharati University, Santiniketan, India

Abhishek Bhattacharya, Institute of Engineering & Management, Kolkata, India

Soumi Dutta, Institute of Engineering & Management, Kolkata, India

This volume presents the Special Issue journal of the International Conference on Emerging Technologies in Data Mining and Information Security IEMIS2018, which took place in the University of Engineering & Management in Kolkata, India from February 23<sup>rd</sup> to 25<sup>th</sup>, 2018.

The volume appears in the special issue Semantic Computing in Web data Analytics of International Journal of Web-Based Learning and Teaching Technologies (IJWLTT) published by IGI Global, one of the largest and most prestigious scientific publishers, in the series which is one of the fastest growing book series in their programme.

The special issue invites authors to submit original research as well as extended articles of existing work that will stimulate continuing efforts to understand the theories and algorithms of in Semantic Computing in web-based mining, and how these have been applied to solve real-world problems in various fields.

Semantic Computing in Web mining addresses the derivation, description, integration, and use of semantics for all types of resource including data, document, tool, device, process and people. The scope of Semantic Computing includes, but is not limited to, analytics, semantics description languages and integration, interfaces, and applications including biomed, IoT, cloud computing, SDN, wearable computing, context awareness, mobile computing, search engines, question answering, big data, multimedia, and services.

The manual extraction of patterns from data has occurred for centuries. The proliferation, ubiquity and increasing power of computer technology has dramatically increased data collection, storage, and manipulation ability. As data sets have grown in size and complexity, direct “hands-on” data analysis has increasingly been augmented with indirect data processing, aided by other discoveries in computer science, such as neural network, cluster analysis, genetic algorithms, decision trees (rules) and support vector machines.

Though people like to think that artificial intelligence is something vague that deals with NASA and aliens, it’s actually rather mundane in the world of research when looked at in the prism of other methods of collection. In fact, data mining, artificial intelligence, and machine learning are so intertwined that it’s difficult to establish a ranking or hierarchy between the three. Instead, they’re involved in symbiotic relationships by which a combination of methods can be used to produce more accurate results.

The solutions aren’t hardcoded into the program; instead, the information needed to get to the solution is coded and AI (used often in medical diagnostics) uses the data and calculations to come up with a solution on its own. Data mining is an integral part of coding programs with the information, statistics, and data necessary for AI to create a solution.

The four papers included in the first part of this special issue are as follows:

1. A Hierarchical Stratagem for Classification of String Instrument
2. Multi-Image Hiding Blind Robust RGB Steganography in Transform Domain

3. Trust Decision Model and Trust Evaluation Model for Quality Web Service Identification in Web Service Lifecycle Using QSW Data analysis
4. High Performance Fault Tolerant Resource Scheduling in Computational Grid Environment

Thanking all the authors who have chosen the special issue of IJWLTT as the publication platform for their research, we would like to express our hope that their papers will help in further developments in design and analysis of engineering aspects of complex systems, by being a valuable source material for scientists, researchers, practitioners, and students who work in these areas.

*Paramartha Dutta, Abhishek Bhattacharya, Soumi Dutta*

*Guest Editors*

*IJWLTT*