

## Guest Editorial Preface

# Special Issue on Recent Approaches in Data Mining and Knowledge Extraction

Vijender Kumar Solanki, CMR institute of Technology (Autonomous), Hyderabad, India

Jaime Lloret Mauri, Polytechnic University of Valencia, Spain

Vijay Bhaskar Semwal, Indian Institute of Information Technology, Dharwad, India

The technology advancement is the result, in which lot of efforts are taken by research and industry experts; the lifestyle is improving with the technology. In almost all the domains, the role of technology is indispensable. To bring the worth reading material, for the current R&D reader's, we have compiled this special issue, which is comprising of very interesting technical article. We are sure this work will be giving good support to reader by enriching their knowledge and helping them in their current problem solving approach. We have circulated the open call as well as through RICE-2017, by which we received good numbers of quality papers. However due to scope of special issue and review reports, we were able to add only six papers to this special issue. We are thankful to the authors for their long patience, and it almost took a year to complete this special since the date of call for paper.

The first article titled "A Collaborative Situational Method Engineering Approach for Requirement Gathering: A Re-Defined View" is contributed by Ankita Gupta et, al., in which the authors have presents a novel approach which strongly supports the concept of reusability where both developers and stakeholders are equally involved in capturing relevant requirements of interest using the concept of situational method engineering over the cloud network. It will help software engineers in delivering value to the customer through effective stakeholder and developer collaboration which will reduce disagreements and will help as a platform to early negotiation.

The Second article "An Efficient Innovative Approach Towards Color Image Enhancement" is contributed by Dibya Jyoti Bora, in which he submitted a proposed approach which is a two-step technique. The first step is the noise removal step. Here, an improved median filter, Improved\_Median() is introduced for smoothing the noises exist in the original color image. Then, in the second step, local contrast enhancement is done. For that, an improved version of CLAHE, AA\_CLAHE() is proposed for the local contrast management of the filtered image.

In the third article Prantosh Kumar Paul submitted his works on article "The Context of IST for solid Information Retrieval & Infrastructure Building: Study of Developing Country" in which authors write about an urgent need for introducing such technological and management programs which have been proposed here. Information Science & Technology (IST) with Programs such as Bachelors, Masters and Doctoral Degrees have been listed here with academic and industrial context. This paper has highlighted these programs with their proper SWOT analysis.

In the fourth article, Sachin Kumar et, al. submitted work on the article "Augmenting Classifiers Performance through Clustering: A Comparative Study on Road Accident Data". The objective of this study, to submit comparing three different clustering techniques latent class clustering (LCC),

k-modes clustering and BIRCH clustering on a road accident data from an Indian district. Further, Naïve Bayes (NB), random forest (RF) and support vector machine (SVM) classification techniques are used to classify the data based on the severity of road accidents. The experiments validate that LCC technique is more suitable to generate good clusters to achieve maximum classification accuracy.

In the fifth article, Hemant Palo et, al. submitted work on article “Speech Emotion Analysis of Different Age Groups using Clustering Techniques” the objective of the emotion study has been evaluated for three different age groups of people using the basic age- dependent features like pitch, speech rate, and log energy. The feature sets have been clustered for different age groups by utilizing K-means and Fuzzy c-means (FCM) algorithm for the boredom, sadness, and anger states. K-means algorithm has outperformed the FCM algorithm in terms of better clustering and lower computation time as per result suggestion.

In the last article, Shailesh Digambar Kamble et, al. submitted work on article “An Improved Approach of Block Matching Algorithm for Motion Vector Estimation” The objective of this proposed algorithm is measured by conducting experiments on various video sequences such as “akiyo”, “suzie”, “soccer”, “football”, “paris”, “ice”, “mobile”, “flower” and “user define” having 100 frames on 16×16 micro blocks. Experimentation of proposed algorithm shows that it requires less number of searching points as compared to previous Three-Step Search (TSS) and New Three Step Search (NTSS). Also proposed algorithm requires less motion estimation time as compared to TSS and NTSS. From this, it is concluded that searching point is directly proportional to motion estimation time, as the searching point increases motion estimation time also increases hence, computational complexity increases. Proposed algorithm also detects slow as well as fast motion. In future, proposed algorithm will be used for tracking single or multiple objects as well as in compression techniques. Moreover, proposed algorithm has scope for further improvement by reducing searching points as well as motion estimation time by combining proposed algorithm with different shapes and patterns.

We place our sincere thanks to national as well as international reviewers, Associate editors, who have given their valuable time to provide critical review for the assigned paper. We are sincerely thankful to Editor in Chief, Dr. Zhonhyu (Joan) Lu, University of Huddersfield, U.K for providing opportunity to us to edit their journal’s special issue. I am sure that this special issue will be beneficial to the industry, academicians and researchers, who are working in the domain of Data mining and Image processing.

We are sincerely thankful to our Institution’s Principal, CMR institute of Technology (Autonomous), Hyderabad, India, Polytechnic University of Valencia, Spain & Indian Institute of Information Technology Dharwad, Karnataka, India, who provided us ample open platform to serve as the guest editor duties honestly. I am sure this learning will be helpful for us in research and academia exploration.

Though utmost care has been done by us in preparing this special issue, but still if you share your critical feedback and suggestions it will help us to get better inputs in future works.

*Dr. Vijender Kumar Solanki*

*Dr. Jaime Lloret Mauri*

*Dr. Vijay Bhaskar Semwal*

*Guest Editors*

*IJIRR*