



Special Issue Proposal with Elsevier

1. Issue title and order of guest editors.

Machine Learning and Computational Intelligence in Big Data

Guest Editors

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2. Written proposal.

Big Data consist of the basis of future data driven decision making techniques. Big Data as a research area has attracted the attention of many research institutes and companies worldwide. The reason is that, in many applications domains, huge amount of data are produced and stored requiring for the appropriate management mechanisms to have the so called Big Data analytics services. The increase on the user devices lead to an increased amount of data as well as an increased number of (multidimensional, spatio-temporal) queries over the discussed large amounts of data. The appropriate management of huge amounts of structured as well as unstructured data is the key issue for future research. Decision makers should adopt intelligent techniques over Big Data analytics for reaching efficient and time-optimized decisions according to the application domain.

The adoption of Machine Learning (ML) and Computational Intelligence (CI) methods and theories in handling Big Data could offer a number of advantages. Both ML and CI could provide means for the creation of intelligent systems that will respond to user / application queries in the minimum time together with the highest possible performance. The main focus of this special issue will be on the adoption of ML and CI methods and theories in the Big Data research domain. Contributors will have the opportunity to present novel methods, theories, tools, techniques and methodologies that adopt ML and CI. This special issue will

record recent developments in the discussed field. Topics of interest include, but are not limited to:

- Machine Learning algorithms over Big Data
- Intelligent decision making systems for Big Data
- Classification and regression methods for Big Data
- Supervised, Unsupervised learning for Big Data
- Optimization techniques in Big Data applications
- Prediction methods for Big Data applications
- Handling real-time, distributed large scale data
- Evolutionary computing in Big Data
- Neural networks in Big Data applications
- Swarm Intelligence and Big data
- Handling uncertainty in Big Data
- Applications of Fuzzy Set theory in Big Data

3. A proposed time schedule.

Submission deadline: October 1st, 2014

Authors' Notification: December 15th, 2014

Final submission: January 31st, 2015

4. Outline of any "mini"-review paper.

The review process will be double blind peer review. Reviewers will rate each paper for:

Relevance to the Journal

Novelty of the presented approach

Structure of the paper

Use of English

Appropriateness of abstract

Completeness of the proposed approach

Accuracy of the research results

Discussion and conclusions

Appropriateness of the Reference list

The final result will be one of the following: **Accept, Minor Revision, Major Revision, Reject.** In case of a revision, specific comments will be sent to the authors. These comments should be addressed in order to result a paper ready to be published in the Special Issue. If no appropriate actions are taken for handling Reviewers' comments, a 'reject' will be the final decision.