



Soft computing techniques for big data and cloud computing

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Soft computing on big data and cloud computing is profoundly affecting the global business and world economy, becoming one of the major driving forces for industrial prediction, classification, and better human life. Soft computing mainly includes rough set, fuzzy logic, neural network, genetic algorithm, particle swarm algorithm, chaos, and other parts, while compared with traditional hard computing, soft computing is closer to the objective things themselves, and human thinking more closely with more intelligent to complete the solution to the problem (Fernández et al. 2014; Lotfi and Garibaldi 2013; Zadeh 1993; Jamshidi et al. 2015). In the data outsourcing and multi-party computation, the encryption and other technologies are used to protect the privacy of sensitive information. However, traditional machine learning algorithm cannot be used to classify encrypted data directly, and there are still many challenges and needs to be addressed such as in machine learning algorithm, learn ability, multi-party computation, privacy preserving, outsourcing computation, and computing security. Moreover, the diversity in functionalities and diverse range of resources make some easily vulnerable to hackers, while others stay strong against security threats. Given the lax behavior of users toward device security and having simple channels for data transfer, malware is expected to grow exponentially. These considerations have led to this special issue a place for various researchers applying soft computing techniques around the world to share their state-of-the-art research and development, particularly on advances computing technologies and related areas that could be

beneficial to handle various research challenges in this domain. This has helped us to collect high-quality articles that reported recent research advances in applying soft computing techniques for big data and cloud computing, covering various topics of interest (Mishra et al. 2016; Xu et al. 2015). This special issue contains forty papers dealing with different aspects of big data and cloud computing research issues and other related areas and also emphasizes many open questions (Skourletopoulos et al. 2017; Langin and Rahimi 2010).

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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