Guest Editorial Preface

Special Issue on Big Data and Computational Intelligence

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This special issue talks about Big Data and computational intelligence, which usually refers to the ability of a computer to learn a specific task from Big Data or experimental observation.

Generally, Big Data is the term used to denote vast amount of data being created in today's technology era, and to derive inferences and knowledge from this data we need complex processing. But the future demands computational intelligence than being focused on complex hardware to address complex real-world problems to which mathematical or traditional modelling can be useless. Indeed, many real-life problems cannot be translated into binary for computers to process it. Computational Intelligence therefore provides solutions for such problems. The areas are way more but to keep things concise areas discussed in this issue are finance, medical, and computation.

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In this regard, the first article is taken from the finance sector, the stock market is very volatile and non-stationary in the subject of nature and generates huge volumes of data in every second. this paper analyse the existing machine learning algorithms for stock market forecasting and also developed a new pattern finding algorithm for forecasting stock trend. Experimental analysis is done in this article showing that machine learning could be useful for investors to make profitable decisions. A real-time dataset has been obtained from Indian stock market and learns the model from Indian National Stock Exchange (NSE) through the data obtained from Yahoo API. Two separate algorithms and methodologies are analysed to forecast stock market trends and the iteratively improve the model to achieve higher accuracy.

The second article comes from medical area, here we are getting big data being created from various biometric data. Aadhar card for example in India. Biometric recognizable proof process is utilized for recognising and distinguishing a man for different applications. In the event that the distinguishing proof is finished by utilizing a solitary biometric highlight (confront, iris, finger, palm, and so forth) then the framework is called as Unimodal and if a combination of Biometric is utilized then it is called as Multimodal. In multimodal framework different downsides of Unimodal framework (Noisy Data, Multiple vectors and so forth) are evacuated. The fundamental objective of the proposed work is to outline a system that will give validation in view of three level verification for a man. In those strategies, they endeavoured to confirm with the assistance of changes and analysis. In the proposed strategy a system is created in which on the off chance that one biometric attribute gets flopped then the other biometric characteristics can be utilized for verification.

The third article is from a virtual world i.e. cloud / grid computing, where computational intelligence is required to fulfil a specific task. Powerful computational capabilities and resource

availability at low cost is the utmost demand for high performance computing. The resources for computing can viewed as the edges of an interconnected grid. It can attain the capabilities of grid computing by balancing the load at various levels. Since the nature of resources are heterogeneous and distributed geographically, the grid computing paradigm in its original form cannot be used to meet the requirements so it can use the further capabilities of cloud and other technologies to achieve the goal. Resource heterogeneity makes grid computing more dynamic and challenging. Therefore, in this article the problem of scalability, heterogeneity, and adaptability of grid computing discussed with a perspective of providing high computing, load balancing and availability of resources.

The fourth article is from an emerging field in healthcare and provides a deeper and better understanding of health data. The prime objective of this work is to support clinical decision making and to detect CKD in patients using FCM Clustering technique which will identify fuzziness among the patient's symptoms. FCM will group the patients will similar health issues together. This will enable the doctors to provide smarter and effective solutions to patients.

I conclude by saying by Warren Bennis "…. true learning must often be preceded by unlearning."

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