Big Data Analytic: From Accuracy to Interpretability

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Message from the Guest Editor

The primary disadvantage of Big Data analytics using high-performance classifiers and Deep Learning is that they have no clear declarative representation of knowledge. In addition, the current Big Data analytics have considerable difficulties in generating the necessary explanation structures, which limits their full potential because the ability to provide detailed characterizations of classification strategies would promote their acceptance. Expert systems benefit from a clear declarative representation of knowledge about the problem domain; therefore, a natural means to elucidate the knowledge embedded within neural networks (NNs), support vector machines (SVMs), evolutionary computation (EC) and their hybrids are to extract symbolic rules. However, surprisingly, very little work has been conducted in relation to Big Data analytics. Bridging this gap could be expected to contribute to the real-world utility of Big Data analytics.

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