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Authors:

Attariuas Hicham, Tabaa Yassine, Amin Elyacoubi, Hamdoun Lamia

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Abstract

To enhance the competitive advantage in a constantly changing environment, the manager of a company must make the right decision at the right time based on the information at hand. The Enterprise Resource Planning System (ERP) integrates the management of internal and external information across the organization (finance / accounting, manufacturing, sales and service, customer relationship management, etc.). How to use the information resources of the ERP and how to exercise effective information resources are currently pressing issues. This research proposes an intelligent hybrid sales forecasting system based on Fuzzy Delphi Method, fuzzy clustering and Back-propagation (BP) Neural Networks with adaptive learning rate in ERP architecture (Delphi-FCBPN-ERP). We utilize SPC (Scientific Private Cloud) was to reduce the time computation of the proposed model. This cloud computing platform will allow improved the execution time of parallel neural networks proposed in our model. Experimental results show that the proposed approach is superior then the traditional approaches.

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Index Terms

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Keywords

Enterprise Resource Planning (ERP), fuzzy Delphi, Sales forecasting, fuzzy clustering, fuzzy system, back propagation network, Hybrid intelligence approach.