Double Clustering as an Unsupervised Approach for Order Picking of Distributed Warehouses

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Abstract : Planning the order picking lists of warehouses to achieve when the costs associated with logistics on the operational performance is a significant challenge. In e-commerce era, this task is especially important productive processes are high. Nowadays, many order planning techniques employ supervised machine learning algorithms. However, the definition of which features should be processed by such algorithms is not a simple task, being crucial to the proposed technique's success. Against this background, we consider whether unsupervised algorithms can enhance the planning of order-picking lists. A Zone2 picking approach, which is based on using clustering algorithms twice, is developed. A simplified example is given to demonstrate the merit of our approach.
Keywords : order picking, warehouse, clustering, unsupervised learning
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