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The Identification of RFID Signal Using k -Means for Pallet-Level Tagging

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Abstract

Radio Frequency Identification (RFID) applications are becoming increasingly popular in a myriad of areas, and therefore, an effective RFID technology-based location would offer a much-needed additional in tracking system. This research focuses on the identification of the location of passive RFID at the pallet-level, which uses the RFID signal strength to cluster the pallet level tagging through k -means. A comparison between the actual and the predicted level attained via the k -means clustering is evaluated through a multi-class performance metrics. It was demonstrated from the investigation that the k -means model is capable of achieving a classification accuracy of 69% and 67% for the train and test data, respectively.

Keywords

RFID Pallet-level tagging Unsupervised machine learning K -means