Integrating AI with IoT in Operations Management

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Abstract: *Operational management's use of AI signifies a dramatic transformation in company, altering decision-making processes, efficiency, and competitive dynamics across industries. AI reduces errors and increases productivity by automating manual tasks. Examples of this include supply chain optimization algorithms and AI chatbots for customer support. This study compares various machine learning (ML) strategies for supply chain demand prediction, one of the most popular artificial intelligences (AI) approaches. In the current study, support vector machines (SVMs) and artificial neural networks (ANNs) are used in conjunction with more conventional time series prediction methods, such as exponential smoothing and moving average, to predict the supply chain long-term demand. The largest Indian automaker's component supplier's data set is then used to implement this research. The comparison reveals that the forecasts generated by ML algorithms are substantially more accurate and closer to the real data than those generated by conventional methods for predicting.*

Keywords: Operation management, AI, ML, prediction, supply chain, demand