RETAIL STORE STOCK INVENTOR ANALYTICS

ABSTRACT:

Analytics is widely used in number of business sectors where it has proven to benefit the management and daily operations. Here the proposed system focuses mainly on the retail sector as stocks are handled in bulk quantities which brings in the need for a digitized system that can analyze and help managing the inventory effectively. Analytics in this sector has become a mandatory supporting component as the business actions and decisions are taken potently and quickly based on it. Here the proposed system uses SARIMA (Seasonal Autoregressive Integrated Moving Average) statistical analysis model for performing the analysis on the retail store data such as the sales history of the retail store, inventory and demand history of the store. Unlike other analytics model, SARIMA has seasonal component and parameters as p (AR order), d(degree of differencing), q(order of MA), P(seasonal AR order), D(seasonal differencing) and Q(seasonal MA order) that helps it in handling seasonal time series data. Also, SARIMA has smaller MAD (Mean Absolute Deviation) value that makes it outperform other time series analytics model. Overall, the model efficiently performs retail store stock inventory analysis and calculates the inventory needed to fulfill the customer requirements over a period of time benefiting the retail store with maximum profit.