



Big Mart Sales Prediction using Machine Learning

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Abstract: Nowadays shopping malls and Big Marts keep the track of their sales data for each and every individual item for predicting future demand of the customer and updating the inventory management as well. These data stores basically contain a large number of customer data and individual item attributes in a data warehouse. Further, anomalies and frequent patterns are detected by mining the data stored in the data warehouse. The resultant data can be used for predicting future sales volume with the help of different machine-learning techniques for the retailers like Big Mart. In this paper, we propose a predictive model using XG boost Regressor technique for predicting the sales of a company like Big Mart and found that the model produces better performance as compared to existing models. A retail company wants a model that can predict accurate sales so that it can keep track of customers' future demand and update them in advance of the sale inventory. In this work, we propose a Grid Search Optimization (GSO) technique to optimize the parameters and select the best tuning hyper parameters, the further ensemble with Xgboost techniques for forecasting the future sales of a retail company such as Big Mart and we found our model produces the better result.

Keywords: Machine Learning, Data Exploration, Sales Forecast, Random Forest, Linear Regression.

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