

SEMINAR ABSTRACT

SALES-DEMAND FORECASTING IMPLEMENTED USING MACHINE LEARNING

Sales-Demand use machine learning models to maintain models based on demand for a particular item . Sales forecasting can be extended as a service to small/medium sized businesses to predict the demand of various items.In sales forecasting specifically machine learning algorithm can help business predict how consumers will behave by using data from past transactions and demographic informations.

Machine learning allows businesses to create more advanced forecasting models that utilizes a larger datasets with minimal human effort. Machine learning uses various methods ,including regressions and clustering , to analyze millions of data points before making predictions.By Analyzing data it also predicts what percentage of consumers will complete a transaction in the future .

For sales forecast Exploratory analysis is done to determine most relevant factors that affects the number of sections for a course.Time series forecasting models are used to make intial prediction for number of factors need to meet demand. Appropriate algorithm,commonly used K-Nearest Neighbour ,Support Vector Machine ,Gaussian Naive Bayes, Random Forest and Decision Tree are used for prediction.Geographical region plays major roles in determing factors.After making a dataset and apply appropriate algorithm ,then compare result and accuracy of different used algorithms are determined.This helps to estimate accurate product in demand.

INTERNAL DATA USED FOR SALES-DEMAND FORECASTING

1. Category Name: Name of category which product belongs to, either Smart Phones Or Laptops.
2. Product Brand: Brand of the product used like Samsung ,Lenovo..etc.
3. Product Name: Name of the product.
4. Product Colour: Available Colours for a product.
5. Ram :Available Ram size for a product.
6. Storage:Available Storage capacity for a product.
7. Processor: Available Processors for a product.
8. Cost price: Original cost of a product
9. Offer Amount: Offer provided for a product.
10. Sales Price :Product price calculated after deducting offer.
11. No of Products in each category.
12. Product sold from each category.
13. Product sold from each brand.

EXTERNAL DATA USED FOR SALES-DEMAND FORECASTING

1. Seasonality (time of year, month, day of the week, such as payday or weekends, but also vacations, offers);
2. Competition (products, prices, location, target customers, catchment area, etc.).
3. Consumer behavior and buying habits (feedback);