Product Backorder

A synopsis of the project work being carried out at

Robert Bosch,

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Department of Computer Applications

Manipal Institute of Technology

Manipal University, Manipal

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submitted by

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Abstract

Product backorder is situation when customer order that had not been fulfill. A backorder generally indicates that customer demand for a product or service exceeds a company's capacity to supply it. Total backorders, also known as backlog. Product backorders is a common supply chain problem. Eliminating the problem that help company maintaining its goodwill and customer satisfaction.

Introduction

Current system do not have any analysis for product back order, currently transactions are stored but the loss bearing by the company due to back order and risk associated with the high back order product is not known.

Accurately predict future backorder risk using predictive analytics and machine learning and then to identify the optimal strategy for inventorying products with high backorder risk products. A predictive analytics program can identify which products are most likely to experience backorders giving the organization information and time to adjust for future. The predictive analytics approach enables the maximum product to get in the hands of customers at the lowest cost to the organization.

Objectives

- Processing data and cleaning it.
- Creating model using different machine learning techniques.
- Visualizing data to represent the result based on model created.
- Predicting back order risk based on model with high accuracy.

Modules

Data Analysis: Understanding and preprocessing the data from source. Data Modeling: Creating model from different machine learning algorithms. Data Visualization: Representation of data from different visualization technique. Data Prediction: Predicting the class label using data model.

Technical Details

Hardware requirements

- Operating system: - Windows 7 Professional (64 bits)
- RAM: 8 GB
- Processor: Intel Core i5-3220M CPU @2.60 GHz

Software requirements

- R (3.4.3)
- R Studio (x64)
- Azure ML Studio
- MS Excel 2013