LITERATURE SURVEY
INVENTORY MANAGEMENT SYSTEM FOR RETAILERS USING CLOUD APPLICATION DEVELOPMENT

PAPER 1:

Title: Inventory management for retail companies: A literature review and current trends

Authors: Vanessa Muñoz Macas, J. Andrés Espinoza Aguirre, R. Arcentales-Carrión and M. Peña(2021,IEEE)

Methodology:

This article aims to analyze and present an extensive literature concerning inventory management, containing multiple definitions and fundamental concepts for the retail sector. A systematic literature review was carried out to determine the main trends and indicators of inventory management in Small and Medium-sized Enterprises (SMEs). This research covers five years, between 2015 and 2019, focusing specifically on the retail sector. The primary outcomes of this study are the leading inventory management systems and models, the Key Performance Indicators (KPIs) for their correct management, and the benefits and challenges for choosing or adopting an efficient inventory control and management system.

Advantages:

First, the paper includes a systematic literature review regarding the Key Performance Indicators (KPIs) of inventory control and management in retail companies. Second, the main systems, methodologies, and tools used for inventory management are described. Finally, the current trends in inventory handling and management in retail companies are outlined.

PAPER 2:

Title:A Case Study of Inventory Management System for an International Lifestyle Product Retailer in Bolivia

Authors: Boris Herbas Torrico,Sebastián Alem Oyola

Methodology:

The inventory management system of an international lifestyle product retailer in Bolivia was analyzed and found that the firm showed no use of basic inventory control techniques.Therefore, to reduce supply uncertainty, a new inventory management system based on two strategies was developed: (a) strategies to reduce demand uncertainty; and (b) strategies to reduce process uncertainty.

Advantages:

The study shows that the implementation of reactive flexibility practices can greatly improve inventory practices. It also suggests that inventory management practices from developed countries can also be used in developing countries to reduce supply uncertainty.

PAPER 3:

Title: QR-Based Inventory Management System (Qr-Ims) Of Passenger Luggage Using Website

Author: D.Ruth Anita Shirley, Amruthavarshini R.B , Durainathan A,Karthika M.P.

Methodology:

In this paper , this research is an attempt to optimize web content in the m-flight environment. Here, it provides the design and implementation of a travel booking system based on a paperless mobile network that can be delivered via QR codes.. The site will provide travel schedules for all company flights and an online reservation system that will allow customers to purchase tickets electronically with a valid debit/credit card and have access to web applications via the Internet. In this project, QR codes are used to monitor and update passengers' luggage in this system. The airport department can easily obtain passenger information using QR codes.

Advantages:

A 2D barcode will hold information in vertical and horizontal direction while a 1D barcode will be able to express information in a horizontal direction. This indicates that a typical 3D barcode will be able to hold 100 times more information than that of a 1D barcode.

PAPER 4:

Title: Customer Churn Prediction for a Software-as-a-Service Inventory Management Software Company : A Case Study in Thailand

Authors: Phongsatorn Amornvetchayakul ,Naragain Phumchusri

Methodology:

This paper focuses on seeking a customer churn prediction model for a Software-as-a-Service inventory management software company in Thailand which is facing a high churn rate. This paper executes the prediction models with four machine learning algorithms: logistic regression, support vector machine, decision tree and random forest.This paper is beneficial to the case-study company

to help indicate real churn customers and enhance the effectiveness in executive decision and marketing campaigns.

Advantages:

With the SaaS model, inventory management software assists SMEs enhancing the business competitiveness in terms of scalability, versatility, and advanced security at affordable prices.Moreover, the contribution of feature importance scores provides beneficial insights to the case-study company. It highlights that business metrics such as transactions are the top feature importance.It can also imply if a customer is online more frequently and books more transactions via the platform, that customer is less likely to churn.

PAPER 5:

Title: A Proficient Process for Systematic Inventory Management

Authors: Rahil Sheth , Mukund Vora , Rohit Sharma , Mohit Thaker , Prasenjit Bhavathankar

Methodology:

The proposed system manages the stocks of organizations and helps them to better analyze the data pertaining to the storage and sales of goods to generate relevant insights from it. With the proper utilization of technology, the system can be used to store and update the details of the inventory, stock maintenance, and generate sales reports daily, weekly or monthly in the form of various visualization charts. It proposes the formation of a system for storing the data by recording the information regarding the stocks of products identified by various brands and categories. This system thus helps the inventory managers to optimize their functioning.

Advantages:

The system predicts future sales as well as recommends the brand/product. It will also generate an invoice for the user.Direct sales reports of the products will be generated without any time delay.A better understanding of sales will be given to the user by visualization through graphs and charts. Moreover, better recommendations will be given for similar products

PAPER 6:

Title:Case Study on an Android App for Inventory Management System with Sales Prediction for Local Shopkeepers in India

Authors:Tejal Tandel,Sayali Wagal,Nisha Singh,Rujata Chaudhari,Vishal Badgujar

Methodology:

The owners of India's local shops do not necessarily have the capital to invest in proprietary applications for setting up an inventory management system. A very

cost-effective and accessible solution for this problem is a mobile application that provides all the features of a point-of-sale system as well as gives future sales insights. It will enable shopkeepers to manage their current product purchases and invoicing. The predictive sales analysis will help them to modify their investments on products and supplies thereby ensuring maximum profits.

Advantages:

It is advantageous to have a mobile application that not only assists with inventory and invoice operations but also helps with sales analysis. Since sellers are presented with performance reports and product analysis, they can make necessary changes in their policies or way of operation after thoroughly studying and understanding all the factors that impact their sales. Similarly, customers will avail of the experience of accessing the right products at the right time and will stay informed about new products simultaneously.

S.NO	AUTHOR	YEAR	TITLE	CONTRIBUTIONS
1	Vanessa Muñoz Macas, J. Andrés Espinoza Aguirre, R. Arcentales-Carrión and M. Peña	2021	Inventory management for retail companies: A literature review and current trends	The paper includes a systematic literature review regarding the Key Performance Indicators of inventory control and management in retail companies. Second, the main systems, methodologies, and tools used for inventory management are described. Finally, the current trends in inventory handling and management in retail companies are outlined.
2	Boris Herbas Torrico¸Sebastián Alem Oyola	2021	A Case Study of Inventory Management System for an	The inventory management system of an international lifestyle product retailer in Bolivia was analyzed.Therefore, to reduce supply uncertainty, a new inventory management

			International Lifestyle Product Retailer in Bolivia	system based on two strategies was developed: (a) strategies to reduce demand uncertainty; and (b) strategies to reduce process uncertainty.
3.	D.Ruth Anita Shirley, Amruthavarshini R.B , Durainathan A,Karthika M.P.4	2021	Qr-Based Inventory Management System (Qr-Ims) Of Passenger Luggage Using Website	The paper provides the design and implementation of a travel booking system based on a paperless mobile network that can be delivered via QR codes. The site will provide travel schedules for all company flights and an online reservation system that will allow customers to purchase tickets electronically with a valid debit/credit card and have access to web applications via the Internet.
4.	Phongsatorn Amornvetchayakul ,Naragain Phumchusri	2020	Customer Churn Prediction for a Software-as-a-Service Inventory Management Software Company : A Case Study in Thailand	Thus, this paper focuses on seeking a customer churn prediction model for a Software-as-a-Service inventory management software company in Thailand which is facing a high churn rate. This paper is beneficial to the case-study company to help indicate real churn customers and enhance the effectiveness in executive decision and marketing campaigns.
5.	Rahil Sheth , Mukund Vora , Rohit Sharma , Mohit Thaker ,	2020	A Proficient Process for Systematic	The proposed system manages the stocks of organizations and helps them to better analyze the data pertaining to the storage and sales

	Prasenjit Bhavathankar		Inventory Management	of goods to generate relevant insights from it. It proposes the formation of a system for storing the data by recording the information regarding the stocks of products identified by various brands and categories. The system provides a method that will use the concept of data analysis to give information about the most selling, profitable and dull stocks. This system thus helps the inventory managers to optimize their functioning with several data analytics algorithms to provide an all-round solution to their needs.
6	Tejal Tandel,Sayali Wagal,Nisha Singh,Rujata Chaudhari,Vishal Badgujar	2020	Case Study on an Android App for Inventory Management System with Sales Prediction for Local Shopkeepers in India	It proposes to provide a mobile app that not only assists with inventory and invoice operations but also helps with sales analysis. Customers can avail the experience of accessing the right products at the right time and will stay informed about new products simultaneously. Therefore the app will assist in bringing about social empowerment and development but will also present profitable business opportunities to app development companies.