University of Science and Technology

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Increasing customer loyalty using Apriori algorithm

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A Thesis

Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Information Systems

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December 2015

Abstract:

Explore the knowledge from a wide range of data, as a result of the emergence of various data processing activities due to extract only the data. Frequent pattern mining is very important in data mining project.

We discuss in this research to the different approaches to achieve the goal of mining frequent along with the complexities required to perform this task.

We used data taken from the pharmaceutical distribution company on the different pharmacies were working on them,theCompany is looking for a special kind of program that increases the customers loyalty ,this research demonstrates the use WEKA tool for mining using the Apriori algorithm and focus on alternative medicine's best-selling.

Apply APRIORI approach to create frequent item set generally adopts a candidate generation and pruning techniques to satisfy the desired goal.

المستخلص

تنقيب البيانات هو اكتشاف المعرفه من مجموعه من البيانات الضخمه نتجيه لظهور مجموعه مختلفه من الانشطه .

في هذا البحث قد ناقشنا مختلف المناهج للوصول للهدف المنشود ، وتم استخدام بيانات شركه الادويه في عمل الخوارزميه وكانت شركة الادويه تبحث عن برنامج مخصص للزياده ولاء الزبائن ، وفي هذا البحث استخدمنا الاداه WEKA في التنقيب من خلال الخوارزميه Apriori .

1.1 Introduction
Data mining the extraction of hidden predictive information from large databases is a powerful technology with great potential to focus on the most important information.

CRM allows an organization to alter business operations based on the information obtained through data mining. The bridge between common functionalities used by the organization requires creation of reports based on information gathered from data mining.

Association rule learning is a popular and well researched method for discovering interesting relations between variables in large databases. It is intended to identify strong rules discovered in databases using different measures of interestingness. Based on the concept of strong rules.

1.2 Problem Definition

Company has a large set of clients scattered all over the country. The Company is looking for a special kind of program that increases the customers loyalty, to achieve this we will apply the Association Rule algorithm (Apriori).

We used the weka aprior implementation to find out facts and relationships.

1.3 Research Objective

The main objective of this research is to find customers segmentation, and the sub objective of this research is to find hidden relationships between items.

1.4 Research Methodology

By using open source software under the GNU General Public License called (WEKA) Waikato Environment for Knowledge Analysis, this software is one of data mining Tools and we used it in this research on the dataset for company which has 6262 Instances and 8 Attributes.

To segments this dataset on WEKA used one of the Association Rule algorithms called Apriori.

1.5 Thesis Organization
The rest of this thesis is organized as follows; Chapter 2 presents Overview for Data Mining & Customer Relationship Management. Chapter 3 is dedicated for customer segmentation & Association Rules; in chapter 4 is the Implementation of Apriori Algorithm by using Weka. Conclusions and recommendations are given in chapter 5.