C2C-An Intelligent Student Trading Using Data Mining Techniques

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ABSTRACT: An online web application called Student-Trade has been made. It is a best in class arrange for direct buyer to-purchaser trading the Internet. The stage is engaged for direct customer to shopper trading among school understudies. The things for trading join books, family things, devices, lodging rental, sports equipment and coaching organizations. This paper is on the arrangement learning of the Student-Trade web application. One objective is to help the customer to settle on the offering expense of his thing when the thing is being posted in the web application. The system consolidates a creamer neighborhood check computation for choosing the cost of offer thing when it is set for trading the Internet. Data burrowing systems are researched for profitable get ready of an endless measure of information in the database tables. Furthermore, the trading structure would similarly have the knowledge of recommending things or things to a potential buyer given the past purchase plans. The fact of the matter is to give a magnificent trading foundation to the customer.

KEYWORDS: Cost Prediction, Product recommendation, Generation of neighbors.

I. INTRODUCTION

The quick change of information advancement has energized a rich trading condition in the Internet. There are many trading stages nowadays yet there is no awesome stage expected for direct buyer to-purchaser (C2C) trading basically for school understudies, to buy and offer their items and ventures clearly to various understudies inside their school or city. Such a need rises in a casual association where things should be traded or exchanged adequately with a little gathering. The eminent locales, for instance, Amazon or eBay are too much worldwide in nature and does not reinforce the quick trading of stock and ventures among the understudies in a little relational association, for instance, a grounds space.

The web application arrangement ought to be present, brisk, and to a great degree simple to use. It is made using ASP.NET, the .NET structure, HTML, CSS and SQL Server. The essential duty of this paper is on the arrangement knowledge of the Student-Trade web application. The objective is to help the customer to settle on the offering expense of the arrangement thing. Also, the web application can in like manner have parts of a prescribed system. That is, the trading structure would moreover have the knowledge of endorsing things or things to a potential buyer given his past purchase plans. The decision candidly strong system is embedded with a creamer neighborhood look figuring, with emphasis on dealing with an esteem proposal issue in a certifiable web trading stage. The response for the esteem proposition issue would require systems from decision candidly steady systems and moreover data mining on a database of used things starting at now traded or starting at now open.

II. PROBLEM STATEMENT

Buying and selling products to the desired Customers/students is an challenging task in the current Trading business.

III. RELATED WORK

There are second hand shops at market which offers used things. In any school, there is a manual approach of offering or obtaining study materials from senior understudies. The senior understudies wishing to give away any materials

should find any adolescents and offer the things, or the youths will examine for seniors to accumulate the things. Retail publicists are continually looking for ways to deal with upgrade the ampleness of their Battles. One way to deal with do this is to target customers with the particular offers well while in transit to move in them back to the store and to contribute more vitality and money on their taking after visit. In existing web business applications, for instance, "flipkart.com", "myntra.com", "amazon.in", "ebay.com", "snapdeal.com" et cetera we have numerous organizations which helps customer shopping. Each one of these applications are not preparing centered. They offer new things, old things for an extensive variety of customers.

Drawbacks of existing system

- Manual Approach

- Cost is decided by the seller
- No proper recommendations
- Generic application
- Lack of user satisfaction
- Less Efficient

IV. PROPOSED METHODOLOGY

There are second hand shops at market which offers used things. In any school, Proposed structure is an Online based application where understudies expect buyer and trader parts. Seller exchanges the thing details[used preparing related things, for instance, books, contraptions, lodging rental, sports adapt and tutoring organizations, lab materials etc], for instance, thing name, delineation, segments, cost and photos into the server. Proposed structure predicts the offering taken a toll for the exchanged thing and now the captivated junior students[buyers] can purchase that thing and system will endorses the things for the understudies in light of their trades history.

A. Methodology for cost prediction

Proposed framework makes utilization of "hybrid neighborhood search algorithm" for deciding the cost of offer thing when it is set for exchanging.

Step 1: Scan the dataset (stockpiling servers)
Recovery of required information for mining from the servers, for example, database, cloud, exceed expectations sheet and so on.

Step 2: Calculate the likelihood of each property estimation. [n, n_c, m, p]

Here for each property we figure the likelihood of event utilizing the accompanying recipe. (said in the following stride). For every class(price) we ought to apply the formula.

Step 3: Apply the formula

$P(attributevalue(a_i)/subjectvaluev_j) = (n\_c + mp)/(n+m)$

Where:

n = the quantity of preparing cases for which v = vj

nc = number of cases for which v = vj and a = ai

p = from the earlier gauge for P(aijvj)

m = the equal specimen measure

Step 4: Multiply the probabilities by p for each class, here we numerous the aftereffects of each quality with p and last outcomes are utilized for characterization.

Step 5: Compare the qualities and characterize the credit qualities to one of the predefined set of class

Test Example

Classification – Book (sort subject)

Attributes(Constraints) – C1,C2,C3 [m=3]

Subject (Price) – 100,150 [p=1/2=0.5]

Preparing Dataset

Product C1 (X,Y,Z)C2 (A,B,C)C3 (P,Q,R)(Price)

Product	C1 (X,Y,Z)	C2 (A,B,C)	C3 (P,Q,R)	(Price)
Book1	X	A	P	100
Book2	X	B	Q	100
Book3	Y	B	P	150
Book4	Z	A	R	100
Book5	Z	C	R	150

New Book6 Constraints – X,A,R   Price – 100/150 ?

$$P=[n\_c + (m*p)]/(n+m)$$

100 – 0.7 * 0.7 * 0.5 * 0.5 (p)   = 0.1225

150 – 0.3 * 0.3 * 0.5 * 0.5 (p) = 0.0225

Since 0.1225>0.0225

So this new book6 is arranged to 100rs

This is one little case, this calculation works fine for a wide range of items and a wide range of limitations.

B.Recommendation comprises taking after strides
   i.   Proposal Process
On the premise of cooperative separating guideline, the suggestion procedure of understudy's attractions can be isolated into three stages.

1) The portrayal of client (understudy) data. The acquiring history of attractions by understudy should be broke down and demonstrated.

2) The era of neighbor clients (understudies). The likeness of understudies can be figured by the purchasing history information and the cooperative sifting calculation. A neighbor understudy rundown can be ascertained on the premise of known similitudes.

3) The era of fascination suggestions. Beat N attractions will prescribed to the understudy as indicated by the purchasing history of his neighbors.

As per above strides, client's fundamental data and past obtaining history can be utilized to ascertain the client rundown of neighbors.

ii.   Generation of Neighbors

Neighbor users generated mainly based on the similarity between each user.

 Suppose that the set of all students S={S1, S2...Sn}, for each student Si (i=1, 2... n), the system can calculate the neighbors list including the top N students which similarity is higher than the given threshold.

There are mainly three ways to measure the similarity between customers, including Cosine method, Correlation similarity method and Adjusted Cosine method

100	150
X	X
$P=[n\_c + (m*p)]/(n+m)$	$P=[n\_c + (m*p)]/(n+m)$
n=2, n_c=2,m=3,p=0.5	n=2, n_c=0,m=3,p=0.5
p=[2+(3*0.5)]/(2+3)	p=[0+(3*0.5)]/(2+3)
p=0.7	p=0.3
A	A
$P=[n\_c + (m*p)]/(n+m)$	$P=[n\_c + (m*p)]/(n+m)$
n=2, n_c=2,m=3,p=0.5	n=2, n_c=2,m=3,p=0.5
p=[2+(3*0.5)]/(2+3)	p=[2+(3*0.5)]/(2+3)
p=0.7	p=0.3
R	R
$P=[n\_c + (m*p)]/(n+m)$	$P=[n\_c + (m*p)]/(n+m)$
n=2, n_c=1,m=3,p=0.5	n=2, n_c=1,m=3,p=0.5
p=[1+(3*0.5)]/(2+3)	p=[1+(3*0.5)]/(2+3)
p=0.5	p=0.5

TABLE I. Purchasing History of the customer

Customers	Attractions				
	A_1	A_2	A_3	A_4	A_5
T_1	1	0	1	1	1
T_2	0	1	1	1	1
T_3	1	0	1	1	0
T_4	0	1	1	0	1
T_5	0	1	0	1	0

$$sim(T_i, T_j) = \frac{|S_i| \cup |S_j|}{|S_i| \cap |S_j|} \qquad (2)$$

Based on (2) and Table 1, we can calculate the similarity between T_1 and T_2, T_1 and T_3, T_1 and T_4, T_1 and T_5 as follows

$$sim(T_1, T_2) = \frac{|S_1| \cup |S_2|}{|S_1| \cap |S_2|} = \frac{3}{5} = 0.6 \qquad (3)$$

$$sim(T_1, T_3) = \frac{|S_1| \cup |S_3|}{|S_1| \cap |S_3|} = \frac{3}{5} = 0.6 \qquad (4)$$

$$sim(T_1, T_4) = \frac{|S_1| \cup |S_4|}{|S_1| \cap |S_4|} = \frac{2}{5} = 0.4 \qquad (5)$$

$$sim(T_1, T_5) = \frac{|S_1| \cup |S_5|}{|S_1| \cap |S_5|} = \frac{1}{5} = 0.2 \qquad (6)$$

If the value of threshold θ is set to be 0.5, then the neighbors of T_1 are T_2 and T_3.

iii. Generation of Recommendations

Suggestions of attractions are registered by the obtaining times of neighbors. As per the computation above, we realize that the neighbors of client/understudies T1 are T2 and T3, so we can list all the obtaining history of the considerable number of attractions in order to rundown the most famous ones. As recorded in Table 2, we can find that the maximal buying times of neighbors are fascination A3 and fascination A4.

TABLE II. Purchasing history of neighbor customers

Customers	Attractions				
	A_1	A_2	A_3	A_4	A_5
T_1	1	0	1	1	1
T_2	0	1	1	1	1
T_3	1	0	1	1	0
Total	2	1	3	3	2

At the point when new clients enter the framework, there is generally lacking data to create proposal for them, in light of the fact that there is no buying history of the new understudies. We call this as frosty begin issue. The standard arrangement of the icy begin issue is closeness figuring between every client by profile data, for example, client region of intrigue, Course and Semester.
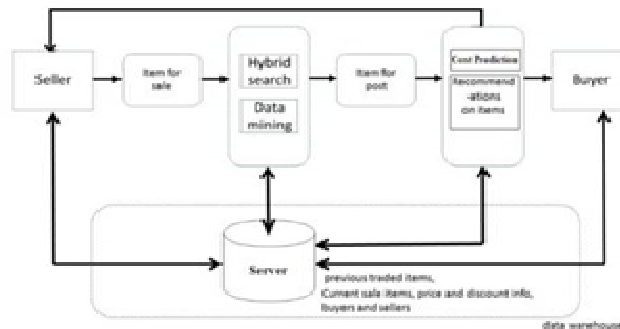

Figure 1 : Block Diagram for seller and buyer transaction

The decision support system (DSS) aim is to give an adaptable and intuitive device to help tackle the price recommendation issue. Figure demonstrates the design of the DSS.

Utilizing the strategies for the data innovation, the DSS is outlined as a dispersed keen framework with an easy to understand interface. It is a graphical interface that offices the merchant's basic leadership handle on deciding a cost available to be purchased in the Internet commercial center. The data of related things in the database would be required in the choice bolster handle. Information mining on the unlimited measure of data is required so as to give continuous reaction to the dealer. In this paper, a half breed neighborhood look calculation has been utilized.

V. RESULT

As student uploads the product our system will help to predict the cost, using data mining technique called hybrid neighborhood search algorithm. The figure 2 represents the cost prediction of the product by adding the constraints to the product. And another specialty of our system is that recommends the products for buyer (student) .the figure 3 represent the recommendation of the product for the particular buyer (student).
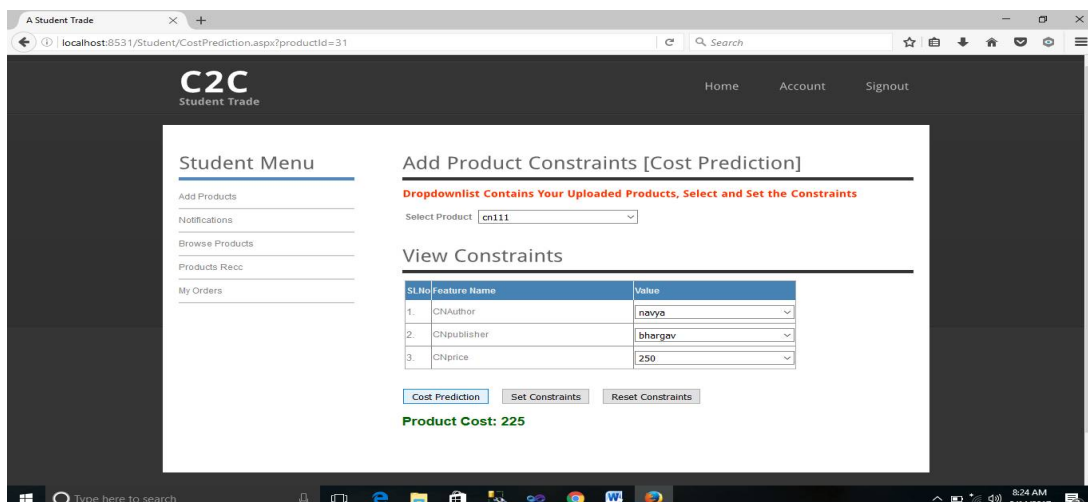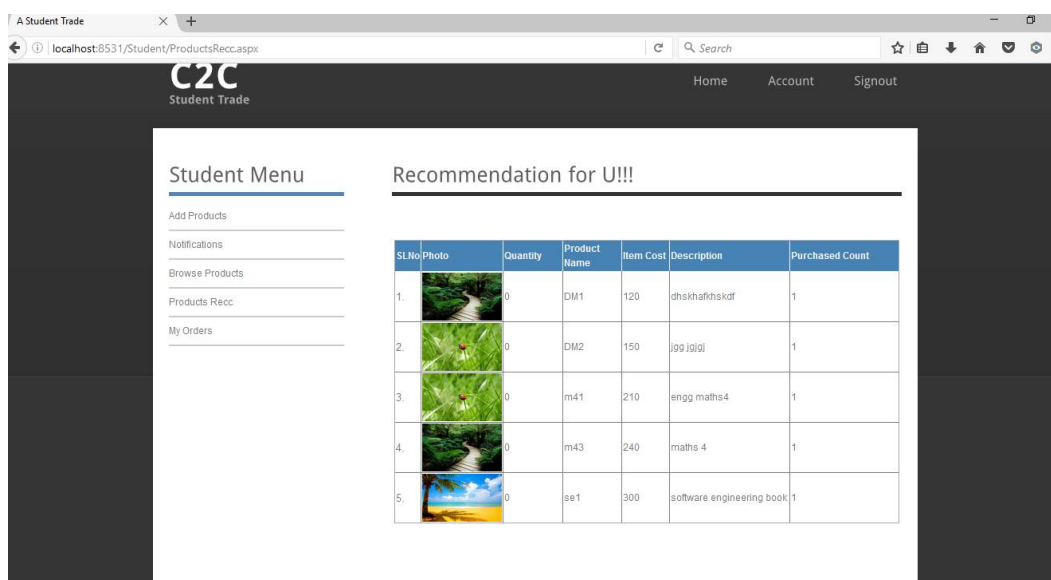

Figure 2: Cost prediction of product.

Figure 3: Recommendation of products for a student.

VI. CONCLUSION

There are by and by various online trading stages in the Internet. Regardless, they have diverse detriments and are not welcome by school understudies who basically require a clear however then watchful and simple to utilize arrange for trading on grounds (or inside a little gathering). For people trading inside a little gathering, they would avoid any burdens to setup portion record or mailing of things to the buyer. This paper is revolved around the change of web application to energize such a need with an intend to giving a sharp UI to both the shippers and the buyers. For a seller, the astute trading stage has given ceaseless chase on related things in the business focus and would propose a cost for the arrangement thing. This helps a merchant to post bargain things as per the market. Techniques from data mining, decision candidly strong system and neural framework have added to the method of programming progression. For a buyer, the sharp trading stage can amass information on his past got things from the databases. Similarly, buyer can express his interests or post requests certain charming things. The recommender structure would then endorse bargain things to the potential buyer. When all is said in done, the stage centered for direct buyer to-purchaser trading would be more wise, less hard to-use and all the more easy to understand.

VII. FUTURE ENHANSMENT

- Online Payment- In future the installment will be through web based, enabling the understudies to pay cash just through internet.
- Upading the status of the product,if it is damaged before it posting for trading.

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BIOGRAPHY

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