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Online Auction System in E-commerce Products using Deep Learning and Data Mining

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ABSTRACT

An online auction system is an auction which is held over the internet. It is a popular method for buying and selling products and services. Online Auction System s helps to customer to sell and buy product in best price. This application is used to sell the anything on the website from house. Online auction system is becoming a more an more popular is electronic E-commerce, It Deeply learn becomes a main stream trending in customer to customer such as E-bay. Thousands of people take part in internet auctions everyday, bidding on items from different places. Thousands of people take part in Internet auctions every day, bidding on items from different places. Buyers and sellers alike benefit from the great opportunities that online auctions provide, but these auctions also provide criminals the opportunity to perpetrate fraud. The online auction environment is full of shill and fraud bidders and the losses incurred because of these offending activities are huge. This problem of Shill bidding and fraudulence can be solved by applying Data mining and Machine learning techniques. So, this paper will help us get an idea about different auction types and different data mining and ML algorithms that can be used to prevent the forgery that is prevalent in online auctions.

INTRODUCTION

The Online Auction system in mentioned Data Mining Clustering Technique can be used to make the auction. Basically, This Technique is used to make data into groups based on similar Characteristics to make data is Meaningful. The system also consists of products sorted by categories and by price. User's feedbackis also provided to Admin. The purpose of this project is to build an "on-line auction management system", a place for buyers and sellers to come together and trade almost anything. In fact, the system consists in a web-portal where registered users can propose new auctions, place bids in order to buy the items on auction, send messages to other users and receive automatically news via e-mail. Registration of users is preceded by a "pre-registration": to check whether users insert their real e-mail address, they receive an e-mail with an auto-generated secret code that they will be asked to type in a second moment to confirm the data (name, address, phone number etc.) they entered. Without this confirmation, a user cannot access the functionality of the portal. © 2023 JETIR May 2023, Volume 10, Issue 5 www.jetir.org (ISSN-2349-5162) JETIR2305687 Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org g592 The system is realized with a 3-tier architecture: a relational database that store the information regarding items, users, auctions and categories of auction; an application server that cares about the business logic of the system and the presentation layer that consists in the web browser where users can interact with the system. With such architecture, the database is never directly accessed: for example administrators can change the data stored in the database without connecting directly to it but using their own browser.

LITERATURE SURVEY

The online auctioning system is a flexible solution for supporting lot- based online auctions. The system has been designed to be highly-scalable and capable of supporting large numbers of bidders in an active auction. To help business with finance's and purchases in online auctioning system.

Sr.no	Paper	Author	Description
1	Multi-Agent Negotiation system in Online Auction 2010	Liang ZHANG	The steady collaboration field and common concept of exchange may be formed in the cooperation MAS then the agent will have common knowledge in order to complete task
2	A Survey on Online Auction Using Data Mining Techniques 2019	Gomati Shekhar	It can be used to prevent frauds and shill bidding in online auction systems to produce more accurate results.Even though the algorithms have some drawbacks like lacking accuarcy when used with smaller datasets
3	Advanced And Secure Online Web Based Auction System.2022	Sheharyar Khan,Zeeshan	In this paper we will using versatile approach for facilating IOT based online auctioning system
4	Design of Double Auction Mechanism Based on Social Network.2020	Junping Xu	In this paper in traditional double auction market tradable pairs of limited market size to solve this problem to social neworks to realize market expansion.

PROPOSED SYSTEM

The main goals of this system are to sell and bid different types of products to the customers living anywhere around Bangladesh. The website will show all products in categorized manner. Customers can browse any product and their details and can bid on the products. User has to get the order through the delivery policy. Admin can keep track of bids through admin panel. For our project we consider the online auction system as our target. In our country there is not any auction site. So this is an innovative and new idea for Bangladesh. This web based application helps users to choose their desire products and upload products on the site. Users can also easily bid on particular products. This provides a great alternative of auction system for general people.

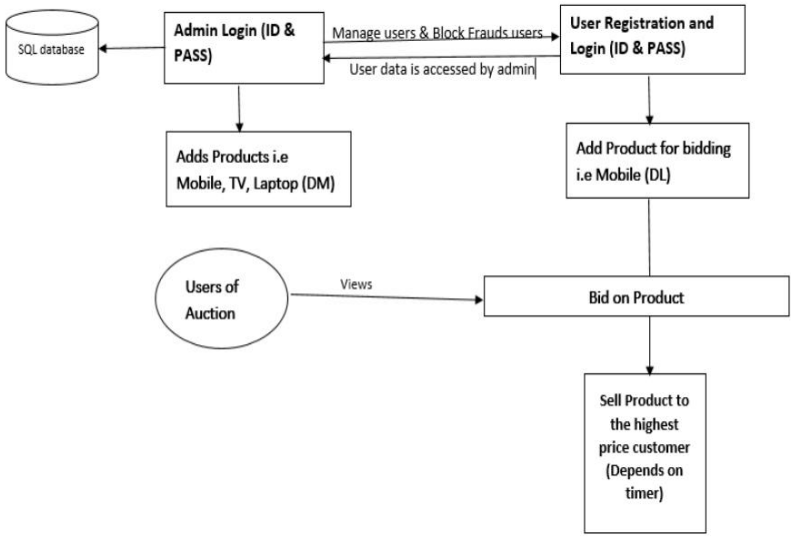

Fig. System Architecture of Online Auction

Using Two Approaches In Online Auction

Deep Learning

CNN or Convolutional Neural Network is one of the official and popular algorithm used for image classification. CNN is an algorithm that classifies images from a dataset.

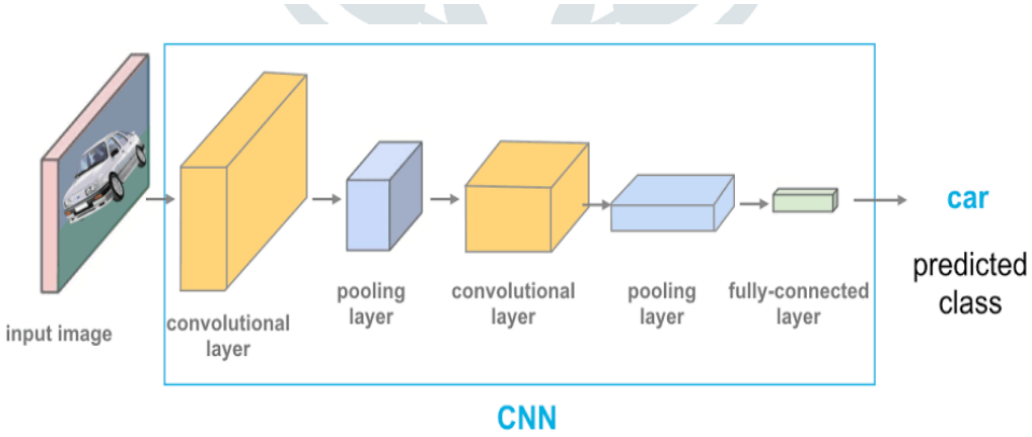

Fig. CNN Using to Image Classification

STEPS OF CNN:-

1. Load the dataset: First load the dataset you want to classify into memory. You can use popular books like Tensor Flow and Py Torch to load data.

2. Preprocess data: Preprocess data to resize images, normalize pixel values, and convert them into tensors. You classify the data and test the parameters.

3. To determining network titles to be classified by network authorities. Typically, a CNN consists of a transmission layer, a pooling layer, and a fully connected layers.

4.Compile the model: loss function, optimizer and evaluation as loss function, optimizer Example of Convolutional Neural Network (CNN) Algorithm.

Data Mining

The removal of several hidden patterns from a large database which appears useful is called data mining. It is a strong technology with substantial potential to help and knowing the world and explain natural phenomenon. Over the years, people have been gathering and analyzing data organizations concentrate on the most valuable information in their database. However, gradually new technologies have begun to play a vital role to handle the storage, analysis and processing of data. Specially, the advent of computer technology has revolutionized the way in which data are managed.

This new method of searching through the data as well as the keen interest to learn from data has brought disciplines like that of data mining. Some researchers also noted that data mining is valuable to discover relevant and useful information from huge data stored in the database through building computer programs that sort through the database automatically, seeking meaningful patterns. The opportunity forth application of data mining has increased tremendously as databases grew extremely and new machine with searching capabilities evolved.

Clustering

It is an unsupervised ML technique to make data into groups based on similar characteristics to make then data meaningful. But in classification the objects are assigned to predefined classes. For example, a company might cluster customers based on their information like location, sales etc. to find the groups to target the right users for selling their products.

Prediction

It is a technique that identifies the relationship between dependent and independent variables. In simple , deriving the relationship between the thing we already know and the thing needed to predict the future. For example, when we have the previous records of volcanic data for the past few decades we will be able to predict the characteristics of the volcano when it is about to erupt. So when those charcteristcs are identified we will be able to do preventive deeds like clearing people in the vicinity etc.

MODULE DESCRIPTION

Administrator slide stories

The first step for the functional requirement collection is the use cases. Use cases are "a description of set of sequences of actions, including variants, that a system performs that yield an observable result of value to an actor". They are used in order to: design system from user's perspective, communicate system behavior in user's term and enumerate all externally visible behavior.

1. Administrator Page:

From the login page, providing his/her administrator ID and password, he/she can access the administrator page that shows the administrator menu to access all the administration activities (manage items, manage users, and manage categories).

2. Manage Items:

The administrator can access all data about items stored in the database and also delete them, but not modify the characteristics of the items (initial price, description etc.).

3. Manage Users:

The administrator can access and modify all data about users stored in the database and also delete them.

4. Manage Categories:

The administrator can access and modify all data about categories stored in the database, add a new category and also delete them. The administrator can delete a category if and only if no items are associated to that category; otherwise an error message is raised.

5. Accept/Refuse Auction:

The administrator can control the new auctions posted by the user and decide whether to accept or to refuse them.

FUTURE SCOPE

Online Auction System organizations can use the relevant variables and factors, identified from the study, to formulate their strategies and plans in the country. The organization scans prioritize the consumer implicit and explicit requirements in Online Auction System environment. The results can also be used by various organizations to identify their target customer segments. The results of the study can be utilized by practitioners in 45% relooking or revamping their strategies for Online Auction System. Online websites should pay more attention to the female segments as results prove that females shop more in online Auction System as compared to men. So companies should devise the policies and strategies to attract more number of people in this segment in future also. With the advances in technology, more business opportunities will be discovered by companies. Electronic commerce will become an important part of the business in companies. Therefore, continuous efforts have to be devoted to studying consumer online Auction System 230 behavior in a dynamic way. With the knowledge of consumer online Auction System behavior, it is believed that e-auction will continue to grow and it will become not only an important business revenues channel, but also a part of people's daily life. The future plan of this project is to improved d esign; implementation and documentation in such a way that anyone can use this project for better perform. I will develop the site more dynamically and the database work as well. There are some limitations in my project. In future I will add the following module for better improvement of the project:.

1. Online account verification.
2. Protect shell bidding.
3. Mobile application of the existing sites.
4. SSL and online transaction system.
5. More security in the system

6. Most user friendly

CONCLUSION

The program that has been built is a hypothetical concept that can, of course, be implemented. As a result, the program is adaptable and adaptable to new requirements. This program will be used as part of a data management system. As a result, anytime the policy is changed, it will be updated. The program is trustworthy since it produces accurate results and ensures that no data is lost. Because it was created with the diversity of users in mind, the program is user-friendly. In this paper, we introduce two mechanisms to solve the information diffusion problem in a double auction market, in which the original buyer is willing to spread the auction information to their neighbors. we discuss the performance of the traditional mechanism (McAfee mechanism) in the double market with social network characteristics, and theoretically study the limitations of the traditional double mechanism in the new scenario. To derive the optimal energy trading in the secondary market, we have proposed a novel online double auction scheme, called the SODA scheme. Our theoretical analysis shows that the SODA scheme satisfies the targeted economic properties and computational efficiency. Online Auction System is a new experience and has greatly impacted the lives of consumers in its short time of existence. It is expected to grow constantly in years to come with advancements in technology. Online Auction System has made consumers more effective and efficient in their behavior and has driven businesses to a new level, forcing many to make the necessary adjustments and changes to reach the new market of knowledgeable consumers. The results of this survey underscore the need for businesses to take the online market seriously.

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