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E-commerce Price Negotiator Chatbot

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Abstract: *Negotiation could be a key component of real world transactions. From major business deals to purchasing vegetables it acts jointly of key the weather of cracking the deal. E commerce Chat Bot System that's Price Negotiator system made all shopping websites to try to to works in efficient manner. This E commerce Chat Bot System project willhelp to extend the net selling and negotiation supported price of the product. Customer satisfaction is that the major concern for all the online based applications and chatbots helps them work this major concern as customers don't need look ahead to customer executives to unravel their queries. Chatbots can solve most of the customer queries without the interference of customer executives. This project provides the overview of a AI Chatbot for price negotiation. The proposed system is used for presentingpersonalized offers and costs. The negotiation also inherits the benefits of previous activity of the user for implementation of proposed system.*

Key Word: *price negotiator, chatbot, ecommerce website, online shopping*

I.INTRODUCTION

From the previous few years e-commerce and online shopping became more and more popular. The e- commerce websites and online shopping stores are increasing day by day. rather than visiting local stores or shopping malls many folks do an oversized amount of their daily purchases online. this variation to e- commerce contains a major impact on the stationary and retail trade. Some people are such a lot busy and ineffectual to travel out for shopping , Some don't prefer to shop in crowd. So instead they choose Online shopping system which could be a virtual store on Internet where customer can browse the merchandise and choose the merchandise of interest. Negotiation may be a combination of both, linguistic and reasoning problems.Negotiation is that the process of exchange the best likelihood of satisfying the wants of both parties. Negotiation isthat the thing we waste our existence because everyone likes doing it. People find it as an honest method to shopfor a product in cheap price. The E- Negotiator Chabot helps the user to unravel query and supply negotiation modeis dissatisfied with the worth. Such system will help the users to freely interact with the software and upload theirproduct related queries and budget and find the response associated with the query.

II. MATERIALS AND METHODS

Tensor flow Library

Tensor Flow is an end-to-end open source platform for machine learning. It has a comprehensive, flexibleecosystem of tools, libraries and community resources that lets researchers push the state-of-the-art in ML and developers easily build and deploy ML powered applications. In this project we have used tensorflow for creatinga chatbot model and to train the model for giving accurate results to the user.

Natural Language Processing

Natural Language Processing, or NLP for brief, it's a branch of computer science that helps computers understand, interpret and manipulate human language. NLP draws from many disciplines, including computing and linguistics, to fill the gap between human communication and computer understanding.It refers to the way humans communicate with one another. A computer should communicate with users in their terms; we might not force users to find out a replacement language. this can be particularly important for users and managers and youngsters, who have neither the time nor the inclination to find out new interaction skills . language processing solved many problems that were rise in AI Field. to try and do experiment generally theory NLP may be a superb domain. So, we are using NLP in our project.

Literature Survey

Ai Based Shopping System for Price Negotiation Using Chatbot System and computer science. This paper contain the unreal intelligence based online shopping system. Around 80% of world consumers try online shopping, this is often the best opportunity for e-commerce companies is to make an extended lasting and profitable relationship with this already existing audience. Such a powerful relationship requires utmost specializein the customer as a full and making sense of a flood of real time information that goes well beyond demographicsor shopping behaviour

a) . There are two entities who will access the system. One is that the admin and another oneare the registered user. User can select the specified product and consider its details and raise cart if he/she wishesto shop for the merchandise . User can even ask queries to AI Bot for bargaining associated with price and regarding any product details and bot will return the query lead to variety of text to speech.

b) GENIUS**:** An Integrated Environment for Supporting the planning of Generic Automated Negotiators. We evaluated the method of the agents design by requiring engineering undergraduate and graduate students to styleautomated agents. These agents were matched twice during a tournament with all other agents. To validate the efficacy of the 2 different mechanisms available in GENIUS – the analytical toolbox and also the repositories of domains and agents – after each tournament, the scholars were exposed to only 1 of those mechanisms and were allowed to re-design their agent. Then, they were matched again in a very tournament. additionally, after the scholars submitted their new agents, they were required to fill in questionnaires and evaluate the look process of their agents.

c) Towards Automated Negotiation Agents that use Chat Interface. The main goal of this research was to push the envelope of automated negotiators research by moving from menu-driven interfaces to talk based environments. As this work transitions from the fruitful work of previously developed agents, we intentionally chose to base ourselves on these agents and also the complex environments they'd studied. Thus, we shied faraway from coping with overly simplified settings, like those with full information, single issues, or alternating turn based offers, and instead considered a fancy problem with partial information, multi-attribute negotiations, and an unconstrained interaction protocol. during this section we detail the negotiation problem we considered, the state of the art KBAgent agent we based our study on, and also the GENIUS environment employed by the agent.

Procedure Methodology:

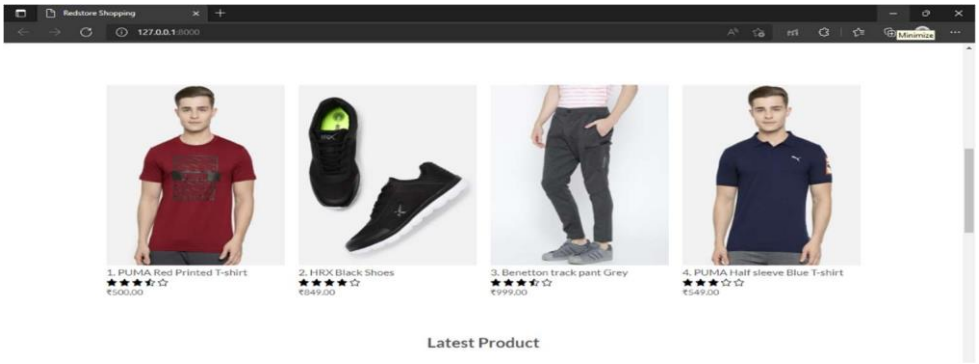
Firstly, the system loads the info of questions and answers dataset associated with the welcome messages,negotiation messages. While using the system user has to ask a question. Then by using the tag word from the query system gives the response with the assistance of tongue Processing. If the user isn't satisfied with the assembly budget then the user selects a product and starts a discussion on negotiation on the merchandise with a chatbot. Whenever the user interact with system, initially they have to say their query. From the query the systemcan extract the tag word. then consistent with the question's tag chatbot gives the response to user. The system can give the response to the user product queries. User must type the merchandise type and budget. The chatbot will search the foremost appropriate products as per user's budget. Once the products are found matching to userssearch queries, then the list is returned. User selects a product and starts discussion on the merchandise with chatbot. The chatbot begins by proposing a full offer, on the user. It then takes offer from user and use formula tocalculate the discounted price and provides it as a offer to the user. If user accepts the value then deal get acceptedelse chatbot agent again elicit a replacement asking price from user. If it's greater than the minimum price then itchatbot accept the deal or give another discounted price to the user by using the identical negotiation formula. If new reduced price is a smaller amount than the minimum value then the chatbot offers the minimum value to thecustomer which he can accept or reject. If the customer is satisfied with the worth which was given by chatbot after performing negotiation formula then the merchandise is sell else if the customer isn't satisfied with bot pricethe discussion stop and customer can explore for new product.

Advantages:

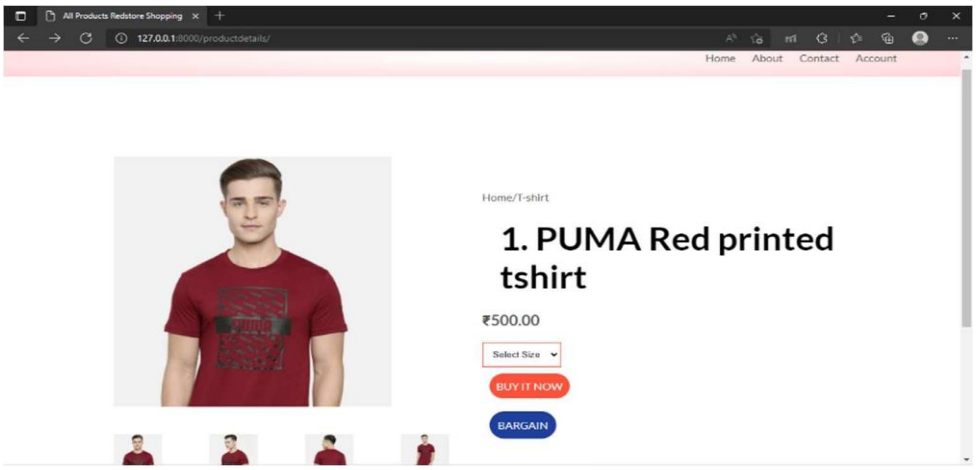
- Helps shops to automate selling online.
- Consumers can negotiate with the AI Bot with relation to product price.
- After price negotiation, user will be able to buy product at negotiated price.

III.RESULT AND DISCUSSION

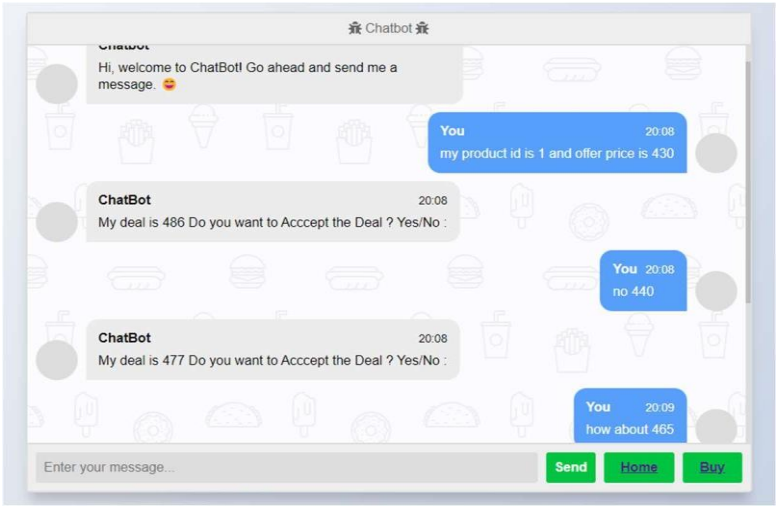
The shopping site looks like this and it is well designed for customers to buy clothing items. This website hastotal 12 products. User have to click on the product if user wants to buy that product. It will redirect user to Shopping page where user will get two options.

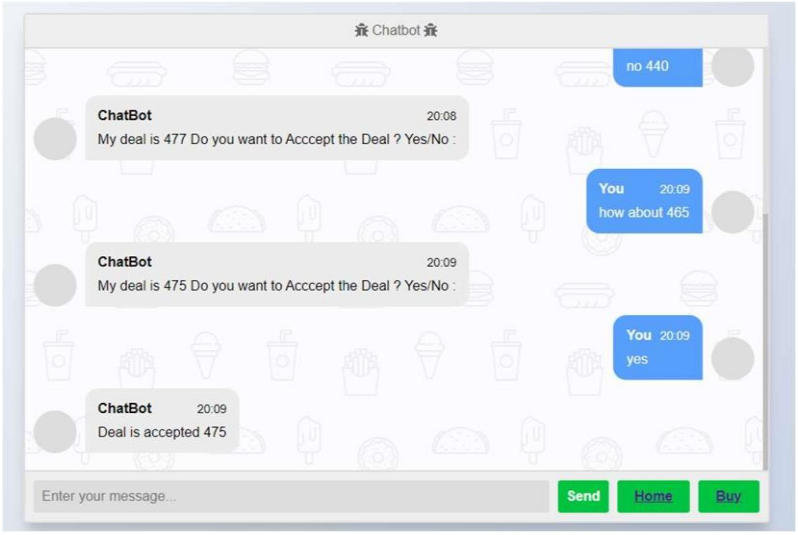


Two options are BUY IT NOW and BARGAIN buttons. If user don’t wants to bargain and buy the product withthe original price so he/she have to click on BUY IT NOW button for purchasing product. Else if user wants to Bargain with chatbot and wants to reduce the price he/she will click on BARGAIN button. It will redirect user to CHATBOT page.



The chatbot is ready to chat with customer and it is giving accurate response to the user. Also chatbot is calculatingdiscounted price correctly and giving a suitable offer to user. After getting a deal user will be able to buy product.





Here the result shows how chatbot works and bargain with the user. User tries for negotiating price at lowest pricebut chatbot limits the user to the price which is greater than deal. After a deal user have to click on buy option forproceeding to purchase

page. The user starts bargain process with 430Rs. But ends with 475Rs. As a buying price.

After clicking on the buy button, the value of product is changed and the new negotiated price is displayed onthe website. User will be able to buy the product with this negotiated price. After purchasing product user willclick on home button for exit.

IV.CONCLUSION

In future this chatbot may be integrated with major websites with a bit modification. More language processing can be implemented to extend the efficiency of chatbot. Flexible service based architecture are going to be highly desirable for future extension. Negotiation is that the term wherethe interaction or discussion in between two parties results to urge the mutual solution which is useful for both the parties. Negotiation starts when supplier and customer have different expectationsabout price. Here we represent a E Negotiator chatbot for commercial websites which might help the users to urge the merchandise online consistent with their budget. Here user can directlyinteract with the system and acquire the response associated with the query. We are using NLP to know the user query and provides appropriate answer.

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