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E-COMMERCE CHATBOT FOR PRICE NEGOTIATION

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ABSTRACT

Negotiation is a key component of real-life transactions. Negotiating is nothing but bargaining. Any big business deal to buying fruits and vegetables from street vendors, it plays a vital role. E- commerce Chatbot project will help us to negotiate the price of the product.

Customer satisfaction is the major concern for all the web-based applications and chatbots helps them to get their issues resolved quickly without wasting their time in writing mails and sending them to the responsible authority and waiting for them to answer. Chatbots act as an intermediate source between the company and the user, and having them making it easy to solve the various issues that any customer might face. Negotiation is something that has linguistic as well as reasoning issues eventually which helps to provide a solution. Quite often, customers usually get confused what they are searching and what they actually want but here, the chatbot will help the customer to shop what they exactly desire.

I. INTRODUCTION

E-commerce businesses have risen in popularity since the Internet modernized our lives and changed the way of our living. Now most of our things are done virtually, from online shopping to watching movies and ordering food. Who doesn't love to purchasing new clothes, ornaments and other various products? Shopping has long been considered as recreation activity by many. There are various reasons that people today prefer doing online shopping rather wandering down the streets. Now, when talking about negotiation, it is not that easy as it has some language barriers. It's the process of exchanging the highest likelihood of satisfying the needs of both parties. And this have led to extensive research in the area of automated negotiators. The E- Negotiator Chat bot helps the user to solve query and provide negotiation mode. This will help the users to freely interact with the software and upload their product related queries and budget and get the response related to the query. If our chatbot project is sucessfully able to implement negotiation then this will attract a lot of new consumers because of these features and will be benificial to all e-commerce site.

OBJECTIVE

Price Negotiator E Commerce Chat Bot System helps the online sites to run/operate in a profitable and systematic manner. The main idea is to help the client get what they really desire and at an appropriate rate based on price of product. With the help of Chatbot customers will be able to perform the following :

- To allow customers interact by asking questions to the system.
- To provide possible answers to the questions from customers with out any involvement of an executive
- Analyze chatbot system

II. EXISTING SYSTEM

A. Parsing Data and Pattern Matching Data:

This is the process of taking data in one format and transforming it into another format. In this system the researchers use this as a process to determine whether a string that a user give as an input has been formulated, with respect to the syntax rule. Therefore, by using this the query input given by the user is converted to the format of questions data that is already stored in the base knowledge of the chatbot. After converting the query by data parsing the data pattern matching is used to analyse relevant text. This is done by forming a pattern to extract useful information for providing a required answer of the query and removing irrelevant details.

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B. Artificial Intelligence Markup Language (AIML):

In this system this is used by researchers as it helps to create human interfaces while keeping the implementation simple to program which can easily be used by humans. This can also help Chat bot to provide the user with relevant answer irrespective to the programming language used, as this system contains a collection of pre-defined/stored patterns.

III. PROPOSED METHODLOGY

A. Getting the query from the user:

User select the product that he/she wants to buy, and get some doubts related to the product and as well as feels that the price of the product is out of their budget. User than select the option to negotiate and clarify the queries related to the product with the AI chat-bot of that e-commerce site. The user can chat with the e-commerce bot and input the queries they have without concerning or involvement of any customer executive.

B. Dialogue roll-out:

Chat-bots can solve most of the customer queries without the interference of customer executives. Since it is a combination of both linguistic and reasoning problems hence it requires an intention for something which needs to be verbalized. Dialogue roll-out is a concept for developing long term planning dialogue agents. This will aim to make a conversation between both human and machine and as well as design and development of e-commerce site. It will help to create a link between the user and the bot and also a dialogue performs a task that can represent part of or a complete conversational thread.

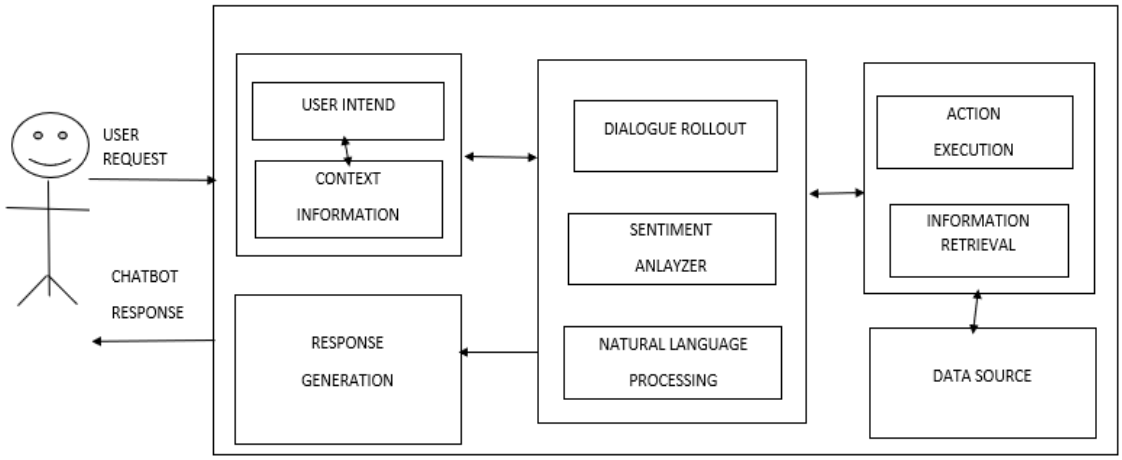
C. Sentiment Analyzer:

After a link between the user and the chat-bot has been created than comes the process of identification of the queries that the user is trying to reach for. For this process we first use the method of sentiment analyzer. In this process the words that are present in the queries sentences asked by the user are broken down differently and then it's analyzed for the words repetition, the sentiment of the word, the task aims with respect to each word, etc. After the sentence is broken into parts the bot then tries to identify the user's intention by using this process and then present the solution accordingly without involvement of any business executives. After the words are broken then from those words tag-words are selected by the machine.

D. Natural Language Processing (NLP):

After the words in the queries are analyzed and the sentiment behind the sentence is known than comes the process to present the solution based on the analysis which might be most helpful to the user. For this process we use the method of NLP, for this process admin feed some knowledge or data sets to the machine so that machine can identify the sentences and take a decision itself as response to answer a query. Then by using the tag-word from the query, system gives the response with the help of Natural Language Processing (NLP).

IV. WORKFLOW DIAGRAM



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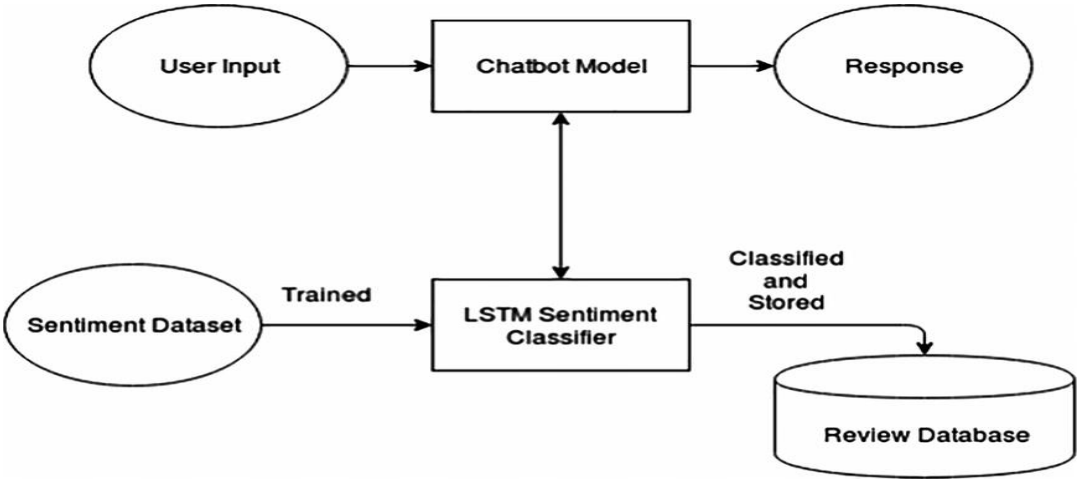

V. CONCLUSION

If the user is not satisfied with the production budget provided by the E-commerce site, then the user selects a product and starts a discussion on negotiation on the product with a chatbot. From the query the system can extract the tag-word. And then according to the question tag, system gives the response to user. The bot begins by proposing a full offer, other products of selected prices, and etc. After the solution to the query presented by the Chat bot to the user then user select an offer and bot compares it with the minimum price. If user desired price is greater than the minimum price then it accepts the deal else it uses the negotiation formula to offer a new reduced price to the user. If new reduced price is less than the minimum value then the chatbot offers the original minimum value to the customer which he can accept or reject.

VI. REFERENCES

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