Design of E-Commerce for Computer Hardware's and Books with AI Enable Chatbot

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*Abstrac*t – Nowadays most people own a smartphone with instant messaging or social networking applications on them and they may use these applications to interact with merchants and sellers, so it would be game changing if, without spending much time sellers could respond to customers, 24 hours a day, 7 days a week. Our paper Describe an E- commerce website based Chatbot. This idea can make user very easy to interact with website. The Chatbot understand the user query in a simple Language. This bot is linked to the website. This E-commerce store has variety of computer Hardware's and Books related to Engineering Students. The Chatbot help user to make understand about the product more and help to make a decision about the product. This Chatbot answers the Query of the user regarding the product. It's basically like an automated assistant.

I. INTRODUCTION

This kind of interaction can be implemented for commercial purposes and the term Conversational-Commerce or Chat-Commerce is used to describe this kind of applications. Although this term can be charming, there is no formal definition of Conversational-Commerce which is also known as Chat-Commerce but social technology expert Chris Messina [4] has proposed a comprehensive definition and according to him conversational- commerce is "utilizing chat, messaging, or other natural language interfaces to interact with people, brands, or services and bots that heretofore have had no real place in the bidirectional, asynchronous messaging context. The net result is that you and I will be talking to brands and companies over Facebook Messenger, WhatsApp, Telegram, Slack". E-commerce refers to buying and selling activity that is online. E-Stores have all of the business activity, such as shopping, Money Transferring, investing and rentals. Even small businesses that provide personal services .E -commerce draws on technologies such as mobile commerce, funds transfer, Internet or Digital marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems.

A Chatbot is a computer software or program developed to an intelligent and areal time conversation with one or more human users via textual methods. The Chatbots can be designed for small talk, or can also serve as a long of interaction with users, providing them with answers based on their Queries. The chatter bot understands Query and answer a response based on the message given to it. Chatbot is one of many examples of AI. Chatbots were initially designed as means of entertainment and some of them have been designed to pass the Turing Test.

The second aspect to be considered is a website. Today most e-commerce websites depend on menu based navigation and a search bar to redirect information to the user. This websites with a large amount of products and not good structured navigation can make it very difficult for anyone to find the information easily and quickly. For prototype if you consider an E-store shopping portal, it has a large catalogue of products. Browsing through the each and every products can be challenging as well as time consuming given the variety of features a product can have.

In this type of scenario an assistant that is a Chatbot make it easier for the user to find relevant information. The user has an option to ask a queryto the bot and ask it normal questions to get responses. This bots has pre-programmed answers, but it can work with dynamic information from a user questions in order to make a proper conversation and suggest relevant Products. This technology is a alternative as compared to using search and sort based

Tools. In this way, chatbot is used to visualize the contents of a corpus (i.e. samples of real world text) and to give Answers to a specific question, which in this context is an e-commerce website.

II. RELATED WORK

ELIZA was one of the first chatbots and it was developed by Joseph Weizenbaum. Its performance includes, recognition of words or phrases as an input, and the output of corresponding pre designed response that can actually make the conversation forward in an apparently meaningful road. However the technique is which characterises a program as a chatbot except as a serious natural language processing system that is the production of responses that are sufficiently vague and non-specific that they can be understood as "intelligent" in a wide range of conversational contexts. More recently and notable programs include A.L.I.C.E. Jabberwacky and D.U.D.E. While ELIZA and PARRY was used exclusively for typed conversation, many chatbots now include functional features such as video games, online games and web searching abilities. Most of the existing virtual agents, also known as the Chatbot, are mainly for entertainment and research purpose. Successful and Award winning chatbots like A.L.I.C.E and CleverBot focus on generic responses to entertain the human user. Some companies like IKEA, Lloyds Banking Group, Google, Amazon and Royal Bank of Scotland are using automated online assistants as first point of contact.

III. CONCEPT DESCRIPTION

In present E-stores contain a wide range of products in each of its category which results in a confusing and complex database. This wide range of products are spread across numerous amount of web apps and pages and categorized regarding to their type. Navigating through these web pages to locate relevant product, according to the user

specifications, can be time consuming as well as difficult, and exasperating.

A user visiting an E-commerce may look for a there use product, or generally browse the e-store. The tools which are used to search, use keyword matching to display multiple relevant results to the user's query. Out of these results, some might be relevant to the user or the results might be not the product that user want to buy. This will lead to an not so good user experience. The search tools fail to deliver relevant results when ambiguous and imprecise words is used to describe a product. The system may not display product that user want or a relevant product. Also in this type of cases a user does not have much information about the product user intends to buy, conventional systems do not help such a user in any way.

The chatbot try to solve the above mentioned problems by presenting a more easy way of interacting with the website as well as user. It interacts with you and also suggests products suitable for you. This project dose not takes the using of a complex Natural Language Processing System and logical inference, a simple but large set of pattern matching templates will be time consuming.

A. Proposed System

In order to provide an excellent service to the user, the seller in e-commerce world is required to actively involved in communication with its customer. In some condition e.g. in vacation or during a rest, the seller might be unable to solve the query with his/her customer. The employing of a customer service center can be a partial solution, this involves additional costs for paying customer service persons.

In order to show the concept of the project we will design an E-Commerce Website for computer hardware parts that can be browsed.

B. Interaction with the User.

From the user's view, the website has a chat feature using that feature the user can chat with the Chatbot. Any query the chatbot requires, the user enters into the message window. The chatbots takes this input and matches it with the pre-programmed answers. It will provides information in its answers and in the form of links to the user suitable or relevant products.

IV. COMPONENTS

The two important component are the e-commerce website and Chatbot. They are integrated with each other to provide good user experience.

A. Website

This website is coded in HTML to structure the body and CSS for Design purpose with PHP used for scripting. The website has a MySQL database that stores and entered the product details and inventory.

B. Chatbot

We can use different technology to build an AI Chatbot such as, React.Js, Node Js, Riverscript. There are some website which is giving Chatbot service.

The major features are:

1. Simple: Responses like question and answers are coded in plain text file. There is no complicated syntax.
2. Powerful: It has a handful of rule that can be combined to build a fairly impressive chatbot.

V. WORKING

To implement the dynamic functionality, the server has a PHP file that serves as a middle of interaction between the Client and the SQL database. When a trigger that contains an object macro is called, the response is parsed and then executed by the Interpreter's Javascript Object handler. The Search response makes an AJAX request to the PHP file, and on receiving a response, displays it within the chat window. This response contains a hyperlink as well as answers to the relevant product pages of the suggested products.

Since the responses are not hardcoded, but it is depend on the customer and the backend database, the chatbot can also be able of providing updated information. In a scenario where the backend database is updated with newer products, the chatbot will also make suggestions taking into the updated database.

VI. CONCLUSION

Hence we have implemented an e-commerce website based chatbot that helpful to improve User Interaction with the E-Commerce website. This chatbot has a stored pre-programmed responses, but it can also also takes dynamic user input into account and thus tends to provide relevant responses or answers and product suggestions. Since the product database is independent of the stored responses, newer products under the respective category can be easily added and removed and require no modification of the stored chatbot responses.

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