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# Chatbot for Insurance Business

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**ABSTRACT**

Chatbot are the new way for individuals to interact with Web and Mobile Applications. Traditionally, to get a query for a product or application resolved had to contact call center or helpline no's. A chatbot allows a user to simply ask questions in the same manner that they would ask a call center or helpline no. : Alexa and Siri are the most popular voice chatbots. However, chatbots are currently being used by a lot of product and servicing based companies for user friendly interaction with customers.

The technology that is being use for chatbot development is natural language processing ("NLP"). The technological advancement in machine learning have greatly improved the accuracy and effectiveness of natural language processing, making chatbots a viable option for many organizations. With technological advancements in NLP we should be able to have continuous improvement in the effectiveness of chatbots in the years to come.

A basic chatbot can be created by providing the bot with some basic frequently asked questions by customers or users and answers to the questions. By implementing chatbot into the organization's enterprise software the functionality of the organization can be improved, allowing organizational questions to be answered, like "What is policy count for today?", or "What is the status of policy?" or "What no of policies issued?".

Today's commercial chatbots are dependent on platforms created by the technology giants for their natural language processing. These include Microsoft Cognitive Services, Google Cloud Natural Language API, Facebook Deep Text, and Amazon Lex. Platforms where chatbots are deployed include various business platforms like E-Commerce sites, Insurance companies, Banks and other customer support services.

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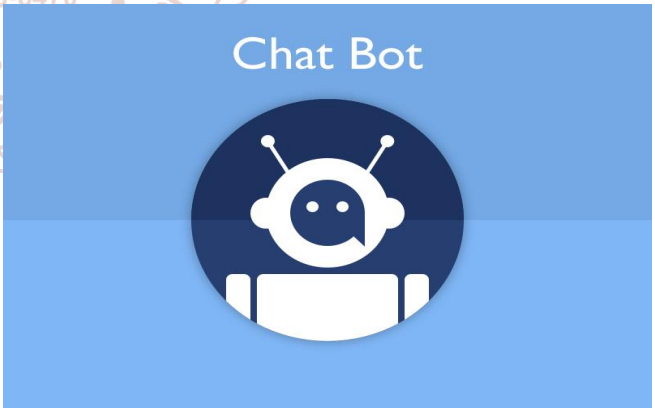
## I. INTRODUCTION

This application shows the details of the Insurance Business. Chatbot Insurance management system is a chatbot application which is developed for tracking the details of the insurance policy, customer details and company details. This application is an online insurance Analysis and information management system that provides easy access of information regarding the people and resources of insurance. User can view Policy details when they login into the Policy Module. This project is useful for all kind of insurance companies to manage the insurance details, to provide the insurance for customer, process the insurance policy details and all kind of insurance processes through online. The Chatbot Insurance management system is a complete solution for organizations, which need to manage insurance for their vehicles, equipment, buildings, and other resources. This chatbot insurance management application has facilities like search tools for insurance awareness articles, guidelines, illustrations through images for visitors. This chatbot insurance management system can efficiently manage the company, records, provides instant access and one that improves the productivity. In this online process the user enter into the chatbot application it will show details about insurance and its types, also it will show the details about different products and services provided. The main objective of the developed system is to allow admin users to register insured persons with their complete details personal and policy. This process contains registration




details required to apply for insurance policy. It also helps the customer to check their policy or product details. Admin has the rights of complete management i.e. insert/delete/update. And also should provide awareness to the visitors of new products ans service provided by the organization.

The system contains the details about Policy, client, claim, policy quotation and report. The admin can only access the database section to change any changes from it. The Policy, client, claim sections are for maintaining the details about those modules. Client information contains details about client id, client name, phone number etc. The Policy module

contains information about Policy no, client id, policy start or end date etc. And the claim module is about claim no, policy details that have been created etc. This application is having a more advantage to be compared with the existing system of this application.

The existing system based on this application is found to have more drawbacks. The system automation is the main drawback of the existing system. But this proposed system is reducing the drawbacks. This system has developed so that the existing system's drawbacks have been enhanced. The system is developed with PYTHON as a front-end language and MS SQL as a back-end language. These two languages are making a best connectivity in offline which makes the current application to be differ from all other existing applications. Along with, interface and backend server interaction are also easy.

An Insurance chatbot is an automated application that has a conversation with your prospects to capture and qualify leads in your digital marketing campaigns. Chatbots are providing user friendly experience to customers. Insurance Chatbot can help resolve: General Queries. Insurance agency related queries like hours of operation, direction, do you sell a specific product? Book an Appointment. Product Inquiry.

Transactions. Making a payment. Most customers find the online process of purchasing an insurance policy complicated and confusing. Choosing the right product requires users to browse through numerous web pages. Chatbots help in providing user friendly digital experience to customer on every step. AI-powered bots decrease the number of steps required to register a claim. Based on customer requirement forms and other documents can be shared via the bot. In addition to this, policyholders can also check the status of insurance claims without having to call a call center or a helpline. There are various chatbots, which can provide quotes, immediate cover, 24/7 support to help insurance companies process new claims. This helps in digitization of an insurance organization.

## II. LITERATURE SURVEY

Chatterbots can be grouped into four categories based on where it is integrated, namely service chatbots, commercial chatterbots, Chatbots for entertainment and advisory chatbots. Service chatbots provides facilities to the customers as the Logistic organization responds to a question about deliveries and copies of documents through messaging channel. Commercial chatbots are developed to purchase for customers. The Entertainment chatterbots are aimed at engaging the users with favorite sports, movies, music and the events that the customers enjoy. Advisory chatbots provide recommendations on services and offer maintenance goods. This type of advisory chatbots can converse with the customers to offer support and advice tips whenever it is needed. And chatbot applications can be categorized into Task-oriented chatbots, that aims to help and guide customers or the chatters to do some works and also have a short conversation and Non-Task oriented chatterbots, which is simply to have a conversation with customers for entertainment.

ELIZA, the first chatbot was released in 1966 and it is not a new concept in the recent computer world. The existing chatbots are developed only for the research and recreational process. But the chatbots so far developed based on commercial conversation were initially released in the banking sector. An example of chatbots in the banking sector is DigiBank, a virtual assistant created by DBS bank of Singapore. Digibank helps the customer to check their transfer money, transaction details, account balance, and the whole transaction details. The user can give both text and voice-enabled inputs to this virtual assistant. Some more examples for chatbots in the banking sector include chatterbots created by Ally Bank, Capital One, Bank of America and Barclays Africa.

The many companies has developed a virtual assistant chatterbots for their e-commerce website. These chatterbots are integrated along with the e-commerce websites, which enables users to purchase suitable products of their wish and need with great-ease. The existing e-commerce websites are coded in PHP with MYSQL as the backend database. To improve the smartness of their chatterbots, they used River Script.

Amazon Lex is an AWS developed to provide a conversational interface for any application using both voice and text. This application was made available from April 2017 to the developer community alone. It provides a communicational interface that includes mobile applications, web applications, drones and more and this also powers Amazon Alexa virtual assistant.

Wu et., al., (2017) has recognized a problem in response selection if the user has a long conversation in a retrieval-based chatterbots. The existing matching methods to match a response candidate with a conversational context doesn't recognize important parts of the context and lose many important information which reduces the accuracy of the chatterbots response. The author suggested a new solution for a matching framework called SMF (Sequential Matching Framework).

## III. EXISTING SYSTEM

A few chatbots Application that are presents. There are a few examples such as Elisa, Alice, and Siri. Each one has a specific working and system.

ELIZA: - The first-ever chatbot was designed in 1966. It was designed to give a human interaction using simple parsing and substitution of key. Since the development of Eliza, more people got emotional connection with it. Eliza was done by joseph Weizenbaum at MIT. There was no human thought or emotion given to Eliza but the most developed was a DOCTOR which provides human-like interaction towards the users.

ALICE: - ALICE (Artificial Linguistic Internet Computer Entity) is based on Eliza. Alice work by using pattern matching rules based on user query expansion and generates a response. There was a problem that arises in the turning test. There were even flaws that were found in short conversations.

SIRI: - Siri was invented by Apple.it is based on a computer program that uses virtual personal assistant and knowledge navigator. It gives responses based on the suggestions. On April 28, 2010, Siri was developed by IOS application which is now available in the apple store. IN iPhone 4s Siri has been implemented through IOS 5on October 14, 2011. Siri listens

to the queries by the user evaluates it on a device .it will be connected to a server through phone communication the data are stored in a cloud server. The information is gathered in database or the network.

## IV. IMPLEMENTATION

Python is used as a front-end language to develop the GUI. The reason for using python is, an interpreter, high-level, general-purpose, object-oriented, imperative, and has a large and comprehensive standard library. Multiple programming paradigms use the Python. Many operating systems have Python interpreters. Python is open source software and it is the easiest platform to implement NPL. Non-profit Python Software Foundation manages the Python and Python.

'MySQL' is used for back-end for the system. 'MySQL' is a commonly used database management system for all applications. In MySQL, the database is organized as a structured collection of data. The data can be anything from a simple shopping list on an e-commerce website to a picture gallery that is managed by a website or a vast amount of information in the corporate network. In addition to that, with the help of MySQL one can access, and process data stores. In a computer database, we need a DBMS (Database Management System) such as the 'MySQL 'server. DBMS plays a vital role in managing and computing, which enhances the computer capability of handling a large amount of data. The advantages of using MySQL are it provides data security, high performance, complete workflow control and reduces the total cost of ownership.

### A. Architecture Diagram

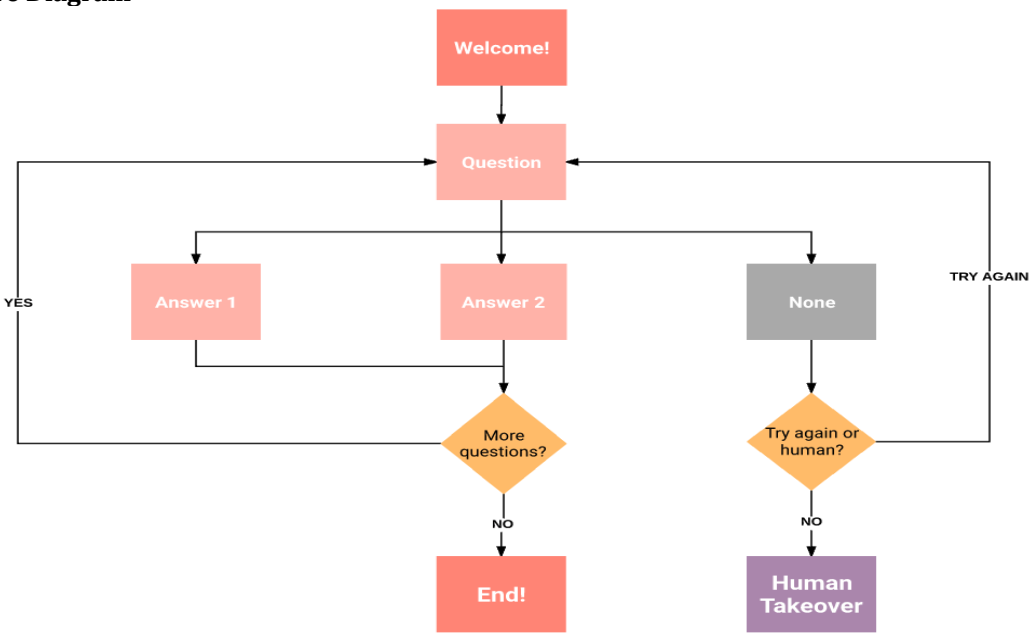



**Fig Architecture Diagram**

### B. Flow Diagram and System Modules

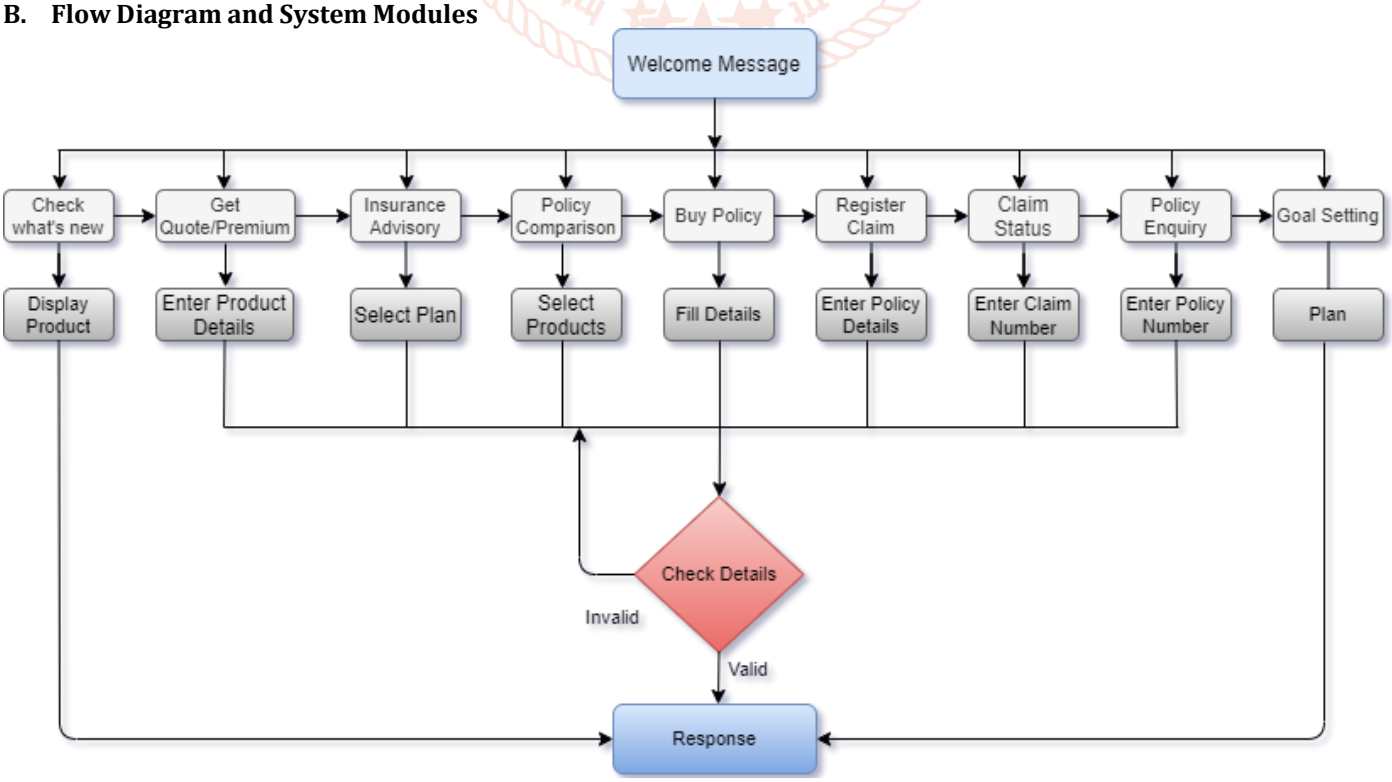
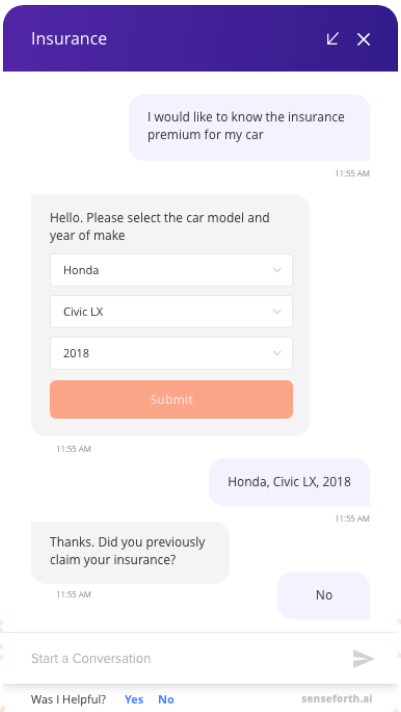



**Fig Flow Diagram**

The system now developed contains different modules. These collections of modules are used to develop a complete application. The following modules are implemented to design the Chabot for an Insurance Business.

1. **Get Quote/Premium calculator:** This module is used for calculate the premium amount for the information provided by customer. This module is used to get best quotation for Insurance. Enter product details and calculate the premium.




2. **Insurance Advisory:** This module is used for finding best Insurance policy plan. Enter Details and select the plans.

3. **Policy Comparison:** This module is used for Comparing different plans and to decide best plan. Select suitable plan and proceed further.

4. **Buy Policy:** This module is used for buying the insurance policy. Enter details and buying the insurance policy.

5. **Policy Enquiry:** This module is used for policy enquiry. Enter policy no to get your policy Information.

6. **Document Submission:** This module is used for submitting the relevant document online. Select all document which want to upload and submit.

7. **Register Insurance Claim:** This module is used for claim registration. Using this upload document online and register claim.

8. **Check Claim Status:** This module is used for checking claim status online. Enter claim no to check claim status.

## V. PROPOSED SYSTEM

There is has not been a chatbot developed for Insurance Business to improve the communication amongst the users we have developed a chatbot that is available to the user 24*7. This chatbot uses the user's history search and interest to analyse the Insurance products they are interested in and presents it to the user. This chatbot needs not be opened on a website to search for a product.it analysis the product on different websites and gives the best results according to the user's interests. There are unique features in this chatbot compared to others such as email notification which provides information about similar the users are interested. The feedback of a specific product can also be sent through this chatbot. If there are any problems and queries about a specific Insurance product the chatbot will provide the contact information of the Customer care or agent. The chatbot provides policy detail, catalogs of different insurance products specification and insurance product features. Through chatbots, policy booking can be made and policy status can be checked. The time consumption of using the chatbot is less compared us physical searching for a insurance product.

## VI. CONCLUSION AND FUTURE ENHANCEMENT

Chatbot has been developed for the requirements of users. They are bringing a new way for businesses to communicate with the world and most importantly with their customers and with the rise of emerging technologies and Artificial Intelligence (AI). They are being used in customer support, our chatbot is a such an approach. It helps the users to interact with the chatbot and the chatbot analyses the e-commerce site an gives a recommendation according to uses needs. The development of chatbot helps both the user and seller to communicate effortlessly. The future enhancement development involves better algorithm identification according to the user's specification.

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