



Voice Assistance Based Telecommunication System

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Abstract

— In this research we are aiming to plan, develop and deploy a model which is based on voice recognition and speech recognition. We are learning the stages of voice recognition technology, depth of its working accuracy, probabilistic use cases, and system friendliness with the help of Python Programming Language. Python is easy to learn, High Level, Power full programming Scripting language. Fully developed voice recognition modules are to be used for development of our research oriented topic.

Keywords— Chatbot, Customer Service, ,Speech recognition, Telecommunication, Voice Recognition .

Introduction

A chatbot is a PC framework, which can communicate with clients by utilizing characteristic language. Ordinarily, it is intended to serve in a specific space, for example, web based shopping, on the web often posed inquiries (FAQ) and furthermore colleague framework[3]. Clients can undoubtedly utilize it without foundation learning or then again encounters. Besides, chatbot can serve numerous individuals at a similar time with a similar point and without getting exhausted. Subsequently, this might be the appropriate capacity to be embraced in open assistance, for example, the therapeutic help. Consequently, the goal of this work is to expand the administration capacity also,

decline the activity cost of restorative expert help by utilizing the chatbot.

System Overview

Our system is fully designed and idealized by us after aiming to develop product that will help in improving customer service process for normal people independent on language literacy. System will take input from user in form of query and through voice commands. Using voice recognition we will detect the language of input from user. Then we will find appropriate response for the query from our pre-build database. This query will be translated to language from which user has given query. Then output will be in the form of voice and in the language of user itself.

Problem Statement

Calling to customer care and getting solution for your query is bit hectic process. You need to listen all options till the end to wait and select your query. Language barrier becomes problem as Systems are not designed for multiple language.

Option based Customer Care Communication is confusing and time consuming.

Purpose

To build Multi language response system for wide use regardless the State or Country. To develop Voice enabled system that will work on voice commands. To reduce System interaction.

Objective

To reduce the wastage of time in Automated Option Based customer care service.

To enable system to answer in any language spoken by user or customer

To give instant solution to the query and give appropriate output using voice recognition technique.

To give response from system in form of voice and in native language to user for increasing user feasibility.

SCOPE

- ▶ This System can be used in any state of the country.
- ▶ Also after adding more languages system can be made available for Global level edition.

Sr No	Paper Title	Author	Review
1	INTELLIGENT WEB-BASED VOICECHAT BOT	S.J.du Preez1, M. Lall2, S. Sinha	The combination of voice input and voice output allows for a simpler experience which allows a client to run on many types of platforms. The system resulted in a distributed environment to allow for resource management and stability between modules
2	Survey on Chatbot Design Techniques in Speech Conversation Systems	Sameera A. Abdul-Kader, Dr. John Woods	In this paper, it can be said that the development and improvement of Chatbot design is not grow at a predictable rate due to the variety of methods and approaches used to design a Chatbot. General-purpose Chatbots need improvements by designing more comprehensive knowledge bases.
3	Chatbot Knowledge in Database Human-to-Machine Conversation Modeling	Bayu Setiaji, Ferry Wahyu Wibow	The development of chatbot application in various programming language had been done with making a user interface to send input and receive response.
4	An Approach to Enhance Chatbot Semantic Power and Maintainability: Experiences within the FRASI Project	Agnese Augello, Giovanni Pilato, Alberto Machi', Salvatore Gaglio	The approach exploits an ontology to construct dynamic answers as a result of an inference process about the domain the ontology is exploited also to automatically populate, off-line, the chatbot KB by translating properties and relations between concepts into AIML categories.
5	OntBot : Ontology based ChatBot	Hadeel Al-Zubaide, and Ayman A. Issa	In OntBot, the ontology should be mapped first into relational databases automatically to form its knowledge base. OntBot botmaster can extend the capabilities of OntBot's brain by defining new rules

Table No-1

Explanation

The chatbot type of our system, MedBot, is the intent-based Approach. The chatbot is implemented in IM application, where Line application is used in our study. A user sends a conversation phrases to the application. Then the application transfers the message to Dialogflow, which is the engine of the chatbot. The message is extracted to obtain the intent. The response according to the message intent is predefined from the training phrase in the fulfillment. In some case, to react to the request message, the system needs to pick up the data from an external database or external APIs. To do this, the additional coding is necessary. After that, the systems will generate the actionable data that user can understand and send back to the application. Finally, the user will receive responses in forms of text, image, voice, and video.

Proposed System

Numerous procedures for building up the chatbot have been proposed, for example, bibliometric examination and long transient memory (LSTM) systems. Bibliometric is a quantitative examination by utilizing insights to quantify and evaluate Distributions. LSTM systems utilize profound learning strategy in term of regular

language age to make chatbot and train a million discussions in Twitter among clients and operators. More than 40 percent of clients like this framework and the consequence of this framework.

System Architecture

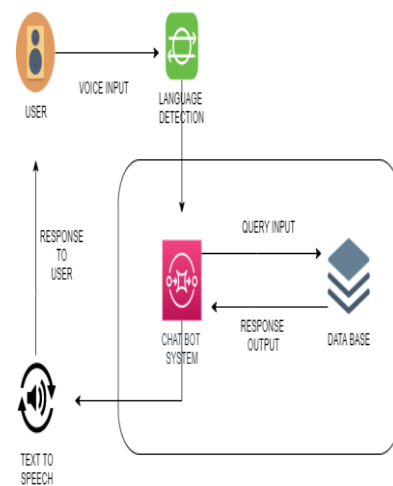


Figure 1:Architecture of Chatbot System.

Conclusion

Here proposed system performs on question input and answer output workflow for Telephonic Customer Care service. This will reduce time consumption and will provenly improve feasibility in terms of language compatibility. Natural Language Processing based Natural Language Tool Kit works in optimization of response for input voice or text question. This paper

presents performance and implementation idea and theory of proposed work.

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