College Information System Based On Machine Learning

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Abstract: The College chatbot project is built using machine learning algorithm that analyses user's queries and understand user's message. This System is an android application which provides answer to the queries of the students. Students just have to type their question through the bot and start chatting. Students can chat using any format there is no specific format the user has to follow. The System uses built in algorithm to answer the query. The system provides appropriate answers as per user queries. The User can query about any college related activities through the system and so the user does not have to personally go to the college for enquiry. The system answers to the query as if it is answered in person. The system replies using a effective Graphical User Interface. The user just has to register himself to the system and has to login to the system. After logging-in the user has access to the various helping pages. The user can query college related activities such as date and timing of annual day, sports day, and other cultural activities. This system helps the student to be updated about the college activity.

INTRODUCTION

ChatBot can be described as software that can chat with people using artificial intelligence. These software are used to perform tasks such as quickly responding to users, informing them, helping to purchase products and providing better service to customers. In this paper, we present the general working principle and the basic concepts of artificial intelligence based chatbots and related concepts as well as their applications in various sectors such as telecommunication, banking, health, customer call centers and e-commerce. Additionally, the results of an example chabbot for donation service developed for telecommunication service provider are presented using the proposed architecture. We are using it for educational purpose to slove the quires of users. Chatbots are programs that mimic human conversation using Artificial Intelligence (AI). It is designed to be the ultimate virtual assistant, entertainment purpose, helping one to complete tasks ranging from answering questions, getting driving directions, turning up the thermostat in smart home, to playing one's favorite tunes etc. Chatbot has become more popular in business groups right now as they can reduce customer service cost and handles multiple users at a time. But yet to accomplish many tasks there is need to make chatbots as efficient as possible. in this system we provide the design of a chatbot, which provides an efficient and accurate answer for any query based on the dataset of FAQs using Artificial Intelligence Markup Language (AIML) and Latent Semantic Analysis (LSA). Template based and general questions like welcome/ greetings and general questions will be responded using AIML and other service based questions uses LSA to provide responses at any time that will serve user satisfaction.

MOTIVATION

A chatbot is a computer system, which can interact with users by using natural language. Normally, it is designed to serve in a certain domain such as online shopping, online frequently asked questions (FAQ) and also assistant system. Users can easily use it without background knowledge or experiences. Moreover, chatbot can serve many people at the same time with the same topic and without getting bored. Consequently, this may be the suitable capability to be adopted in public service such as the medical service. Hence, the objective of this work is to increase the service capability and decrease the operation cost of medical consultant service by using the chatbot

LITRATURE SURVEY

1.   The use of VPS (Virtual Private Server) in Indonesia is still very expensive. The Chatbot application system is very important in the marketing field, especially for disseminating information directly and acceptable to many users at a time. This paper focused on using the WhatsApp application for the Chatbot system. This Chatbot system uses the Python programming language. The message Chatbot flow system will be sent first to the user. Then the Python program will read the incoming message to enter Chatbot. If the incoming message matches the existing conditions, the chatbot will send the information according to the condition. But if it doesn't match, Chatbot will continue to repeat the process of reading incoming messages. The Chatbot system is designed to run successfully on 15 contacts at a time. Chatbot server connection speed affects the speed of sending messages and checking every incoming message. Chatbot simulation program cannot read messages that enter the server if the message contains stickers, emojis and gifs. This is because Python program cannot read the message. This research can still be developed by adding a random message feature.

2.   Chatbots are becoming complex software artifacts that require a high-level of expertise in a variety of technical domains. This technical briefing will cover the software engineering challenges of developing high-quality chatbots. Attendees will be able to create their own bots leveraging the open source chatbot development platform Xatkit.

3.   With chatbots gaining traction and their adoption growing in different verticals, e.g. Health, Banking, Dating; and users sharing more and more private information with chatbots -studies have started to highlight the privacy risks of chatbots. In this paper, we propose two privacypreserving approaches for chatbot conversations. The first approach applies `entity' based privacy filtering and transformation, and can be applied directly on the app (client) side. It however requires knowledge of the chatbot

design to be enabled. We present a second scheme based on Searchable Encryption that is able to preserve user chat privacy, without requiring any knowledge of the chatbot design. Finally, we present some experimental results based on a real-life employee Help Desk chatbot that validates both the need and feasibility of the proposed approaches.

4.   Chatbots are artificial intelligence tools that interact with people in different contexts. A chatbot can be useful to streamline daily processes, serve customers 24 hours a day, provide information about classes, among other things. The appearance of new development technologies has made creating a chatbot an increasingly fast and straightforward process, bringing this kind of applications to people who had never considered using them before. However, this speed in development can lead to specific problems, many of them caused by the lack of usability evaluations. Heuristic usability evaluations are user interface review processes carried out by experts and are an essential part of any assessment process. To date, there are no heuristics to evaluate the usability of chatbots. Therefore, this work proposes five usability heuristics in chatbots that come from the experience developing this type of applications, as well as from a broad review of state of the art. The set of heuristics was tested using a case study with the help of five experts, who evaluated an education-oriented chatbot. The results revealed that, although the proposed heuristics need refinement, they are an excellent first step in broadening the horizon of usability evaluations in chatbots.

5.   The most common means by which unwell people receive health related analysis, disease diagnosis, and medicine prescription are hospitals. This has almost become the norm of all individuals around the world. Hospitals are considered the primary and the most reliable means of diagnosis. The proposed idea of this is to make it easier for people to check on their health as compared to the conventional way of standing in a queue for hours before they could get their medication done. In order to build a chatbot, this research aims to apply the use of the RASA framework. As any person, the chatbot can connect with people and take on the user's symptoms. It will then identify the most likely disease and predict it along with the treatment recommended. This will help people get a quick answer to all their queries without any hassle. This type of system is less known among the people and hence it is not widely used. It will also be of great use to record the nutrients the user has consumed throughout the day.

LIMITATION OF EXISTING SYSTEM

 • Costing: The Existing system is high cost and this is main reason most of the system is failed.

• Technology Complexity: Most of system is the complex to understand, Not user friendly as compare to our proposed system

• Time Consuming Feature: In existing system, the performance is low and most of the time system gets hanged due to load.

• Not Easy to Understand: Systems are complex to understand and they were not user friendly

EXPERIMENTAL SETUP

The Aim of the project is to reduce the problem of time consuming.

• To make a centralized systemto avoid the duplication of data and to provide the security to user.

• It will be enjoyable method without affecting their day to day life.

 • To make a system for normal user who is lack of qualified personnel and adequate infrastructure in rural India.

• Easy to understand framework

• Security giving to significant information of client. • Staying away from the pernicious assaults by programmer.

Hardware and Software Requirements

- Hardware Requirements
- Processor: I5 processor
- Ram: 4GB
- Hard disk: 40GB
- Work Station with above specification

Software Requirement

- Windows Operating System 7
- Flutter
- Andriod studio 3.3
- Supabase

1. Andriod : Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android is developed by a consortium of developers known as the Open Handset Alliance and commercially sponsored by Google. It was unveiled in November 2007, with

the first commercial Android device, the HTC Dream, being launched in September 2008. Most versions of Android are proprietary. The core components are taken from the Android Open Source Project (AOSP), which is free and opensource software (FOSS) primarily licensed under the Apache License. When Android is installed on devices, ability to modify the otherwise FOSS software is usually restricted, either by not providing the corresponding source code or preventing reinstallation through technical measures, rendering the installed version proprietary. Most Android devices ship with additional proprietary software preinstalled,[13] most notably Google Mobile Services (GMS)[14] which includes core apps such as Google Chrome, the digital distribution platform Google Play, and associated Google Play Services development platform.

2. Supabase: Superbase is an end-user desktop database program that started on the Commodore 64 and was ported from that to various operating systems over the course of more than 20 years. It also has generally included a programming language to automate database-oriented tasks, and with later versions included WYSIWYG form and report designers as well as more sophisticated programming capabilities. It was originally created in 1983 by Precision Software for the Commodore 64 and 128 and later the Amiga and Atari ST. In 1989, it was the first database management system to run on a Windows computer. Precision Software, a UK-based company, was the original creator of the product Superbase. Superbase was and still is used by a large number of people on various platforms. It was often used only as an end-user database but a very large number of applications were built throughout industry, government, and academia and these were often of significant complexity. Some of these applications continue in use to the current day, mostly in small businesses. The initial versions were text mode only, but with the release of the Amiga version, Superbase became the first product to use the now common VCR control panel for browsing through records.[citation needed] It also supported a number of different media formats, including images, sounds, and video. Superbase was often referred to as the multimedia database in early years, when such features were uncommon. The Amiga version also featured an internal language and the capability to generate front end "masks" for queries and reports, years before Microsoft Access

3. Flutter : The first version of Flutter was known as "Sky" and ran on the Android operating system. It was unveiled at the 2015 Dart developer summit[7] with the stated intent of being able to render consistently at 120 frames per second.[8] During the keynote of Google Developer Days in Shanghai in September 2018, Google announced Flutter Release Preview 2, the last major release before Flutter 1.0. On December 4th of that year, Flutter 1.0 was released at the Flutter Live event, denoting the first stable version of the framework. On December 11, 2019, Flutter 1.12 was released at the Flutter Interactive event.[9] On May 6, 2020, the Dart software development kit (SDK) version 2.8 and Flutter 1.17.0 were released, adding support for the Metal API which improves performance on iOS devices by approximately 50%, as well as new Material widgets and network tracking development tools..

SCOPE:

Interactive question - answering systems allows us to concentrate on the interaction between the user and the program and not just the question-answering. These systems allow either the user to drive the dialogue or the system to play a greater role by suggesting related materials or even refinements to a user's query

PROBLEM STATEMENT:

Currently we are facing many problem in collage ,we are not getting a proper services from particular collage which leads to the loss of time, as the no of users is increasing due to which providing information to all is not possible.

SYSTEM ARCHITECTURE

Chatbot architecture is the heart of chatbot development. Based on the usability and context of business operations the architecture involved in building a chatbot changes dramatically. So, based on client requirements we need to alter different elements; but the basic communication flow remains the same
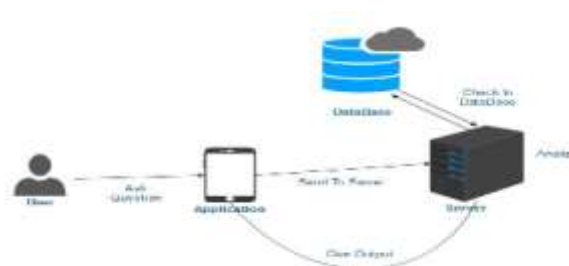

Fig -1: System Architecture Diagram

ADVANTAGES

1.   Easy to use
2.   High Performace

3.   Scalable

METHODOLOGY

The single problem can be solved by different solutions. This considers the performance parameters for each approach. Thus considers the efficiency issues.:

• Problem Solving Methods are concerned with efficient realization of functionality. This is an important characteristics of Problem Solving Methods and should be deal with it explicitly.

• Problem Solving Methods achieve this efficiency by making assumptions about resources provided by their context (such as domain knowledge) and by assumptions about the precise definition of the task. It is important to make these assumptions explicit as it give the reason about Problem Solving Methods.

• The process of constructing Problem Solving Methods is assumptionbased. During this process assumptions are added that facilitate efficient operationalization of the desired functionality

CONCLUSION

We proposed the Educational Chatbot for students and teachers. This Chatbot uses the text recognition for input and text as output. So, it becomes easy for the students to search the information within fraction of seconds. Also, the Chatbot gives direct answers for the questions rather than providing links like web page.

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