



AI CHATBOT USING DIALOG FLOW

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DOI: <https://doi.org/10.47760/ijcsmc.2022.v11i05.006>

ABSTRACT- *A chatbot is a programme that uses Artificial Intelligence to provide human conversation (AI). Chatbots are intended to serve as VIRTUAL ASSISTANTS (VA). They themselves provide one platform for the online promotion of Products and Services. All Higher Educational Institutes provide comprehensive information to students via their websites, which permit the use of social networks such as Facebook, WhatsApp, but also College websites. Overall, searching functionality is required in any website to search for any information, and it includes Social Networking sites Applications such as Facebook and Snapchat regular response are utilised. As a result, Chatbot is both an effective auto-response system and an instant messaging platform. In this paper, AICMS, an AI-based CollegeBot management platform for professional Engineering colleges, provides auto-response to college queries about the college's basic information, class schedules, and academic examination schedules. The system can handle a large number of questions about subjects and placements. The AICMS system is built with Dialogflow, which is supported by the Google API. AI is running as a messenger on Facebook, taking input in the form of text and voice and responding in the form of text and voice. It responds quickly and accurately to student and staff inquiries in an interactive manner.*

I. INTRODUCTION

The traditional tutor-centered approach, in which students are constantly trying to keep up, retain information, and cope with the rapid pace of the modern educational process, still dominates in schools in developed countries. However, such a strategy cannot adequately address the challenges of the digital era, which necessitates special knowledge and skills from students and tutors in order to capitalize on the capabilities provided by Information and Communication Technologies (ICT). Tutors should therefore use modern ICT tools to improve, and possibly optimize, their students' learning experiences. In this context, the use of trending technologies has a new, significant direction

potential. Conversational AI, as implemented as so-called AI chatbots, is a significant emerging educational technology. AI chatbots are intelligent systems/applications that can interact with humans in various aspects of daily life by using natural language (NL). They are mostly found in business customer service as personal assistants. In the educational context, AI chatbots can serve as intelligent tutors by presenting educational material, stimulating dialogue, providing feedback to students, and so on. In some cases, AI chatbots can also play a complementary/supportive role to human tutors by answering students' questions and providing guidance 24 hours a day, seven days a week, something that is obviously impossible or unprofitable to implement with human tutors. This paper reports on recent research related to the design, implementation, and evaluation of an educational AI chatbot with the goal of supporting modern methodological learning. In a CLIL methodology, kids are taught a single topic in a foreign language rather than their native language. CLIL-based activities are primarily intended to teach language and content of a specific subject at the same time. In particular, this paper presents a real-world application of Ai chat bor, an educational AI chatbot that supplements human lecturers in teaching cultural content related to the Minoan Civilization, with a focus on the Minoan Snake Goddess figurine. In Greece, a public Lyceum and two private language schools evaluated the related machine educational programmed in English and French as a foreign language. The results of related experiments show that using Chatbot tech for interactive ICT-based education can support the CLIL method for learning another language and a cultural subject at the same time. The AsasaraBot was designed and built with free software, specifically the Snatchbot platform. The present work makes the following contribution: it incorporates AI Chatbot technologies to enable the modern active learning of CLIL, primarily as an ICT-based tutor and, secondarily, as an ICT-based assistant to a human tutor. The pro - posed approach has been applied and evaluated in English and French as different languages for Greek students, with reports on the approach's efficacy and potential.

II. LITERATURE REVIEW

In this section, we will give an overview of the implementation methods of the chatbot. We will distinguish between rule-based chatbots and artificial intelligence (AI)-based chatbots. Within AI-based chatbots, we will further distinguish among Information-Retrieval chatbot and chatbot generators. We will also discuss the disadvantages and limitations of each. Implementation approach, as well as recent improvements.

AI models, unlike rule-based models, are based on machine learning algorithms that allow them to learn from an existing database of human conversations. For to do this, they must be trained using machine learning algorithms that can train the model using a training dataset. Through the use of machine learning algorithms, it there is no longer a need to manually define and code new pattern matching rules, this allows chatbots to be more flexible and no longer dependent on domain-specific knowledge. As shown, AI models can be categorized into information retrieval based models and generative models.

Information Retrieval Models: Information retrieval models are designed this way that given a dataset of textual information, the algorithm will be able to retrieve the necessary information based on user input. The algorithm used is generally a Shallow Learning algorithm; however, there are also examples of information retrieval models that use rule-based and deep learning algorithms. Models based on information retrieval include a predefined set of possible answers; the chatbot processes the user's request based on this input, it chooses one of the available responses as a whole. The knowledge base for this type of model is usually a database of question and answer pairs. A chat index is built from this database, in order to list all the possible answers in base on the message that requested them. When the user provides input to the chatbot, the chatbot treats this input as a query and information retrieval pattern similar to that used for web queries is used to match the user's entry to similar entries in the discussion index. The output

returned to the user is then the corresponding answer to the question selected from those present in the chat index. The main advantage of this model is that it guarantees the quality of the answers because they are not generated automatically. These models saw a resurgence in popularity in with the advent of Web 2.0 and increasing text available information that could be retrieved on social media platforms, forums, and chats.

One of the main disadvantages of this approach is the creation of the necessary knowledge basic can be expensive, time consuming and tedious. Moreover, if the large volume of data available offers a wider set of training and a wider knowledge base, it also implies that it will be even harder to match a user's input to the correct answer; an important time and resources must be spent training the system to select one of the correct answers available.

Finally, information retrieval systems, because they do not generate answers but rather retrieve answers from a pre-defined set in their knowledge base, are probably less suitable for use as an underlying algorithm for conversation or small talk agents-the so-called social chatbots. Information seeking models are actually less suited to develop a personality, which is an important trait for this type of chatbot. Nonetheless, some progress has been made in developing new Information Retrieval algorithms in recent time, and it is worth mentioning what Machine Learning algorithms are currently used as the core technology for this type of model.

III. PROBLEM STATEMENT

An artificial intelligence bot is a technology that uses natural language processing to create interactions between humans and machines. We are developing a live chat for the school that will respond to user inquiries about the college. The bot is now part of the college website. Within a microsecond, the bot responds to the user of appropriate answers. It also includes an analytics section that indicate the number of consumers who shopped online and used the bot to learn more about the college. Only the administrator has access to this analytics section. Humans get bored answering the same question over and over, and they can only handle 2-3 users at a time, but by implementing this bot, it can handle an unlimited number of users and is available 24 hours a day. This project will involve the development of two critical interdependent modules. They are as follows:

1. Chatbot (based on NLP)
2. Provider (Database and DeepLearning model)

IV. METHODOLOGY

The two components of methodology are understanding abstraction and response generation. Knowledge abstraction is the study of course requirements (which called as data). The quality of the data formed during the knowledge applied external, on the other hand, are dependent on the features of the tools available for Chatbot and its various variants.

An Abstraction of knowledge The three stages of expertise abstraction are gathering, manipulating, but also augmenting knowledge. These periods are largely unaffected by the content of the Chatbot.

1) Collecting data:

Data collection is the process of gathering data on particular factors in a system in order to answer pertinent questions but also assess outcomes.

Data collection is an essential component of research in all fields of study, including the physical and social sciences, the humanities, and industry. Although the techniques vary depending on the discipline, the emphasis on reliable and accurate data collection remains consistent. The goal of all data collection is to collect high-quality information that can be analyzed to provide compelling and credible answers to the questions posed.

2) Data manipulation: The following step is to enter this information into a database. As a result, developers would be able to manipulate data.

Developers could, for example, create two worksheets: one with information organized by topics but instead followed by its most important concepts for each particular topic, the other with a collection of questions from a chat forum but also their answers. Then, by searching for keywords inside the question and answer strings, they can match each question to its corresponding subject. Technically, this entails using a classification technique to mark each topic pair. To ensure accuracy, these labels must be offered a level of trust before being dual by a person. The database will contain questions of reasonable responses; this must indicate that these questions have same objective or meaning, enabling them to be categorized and subsequently converted into Dialog flow intents. As a result, programmers should assign a logo to each topic pair that identifies its purpose. This would greatly simplify the process of transferring data from database to Dialog flow in the long term. Because the degree of similarity with both answers to questions is unknown, human intervention is essential in this case.

3) Dialog flow intercepts entities, and indeed the model understands when those entities are contained within a single entity. Generation of III-B responses A detailed explanation of how entities and intents work in Dialog flow is provided, but it is needed to describe how the system's current implementation will support the proposed approach. A purpose's three basic components are contexts, ensure that the student, and responses. Contexts layer the conversation in just such a sense that only those intents that are present can be activated. Paragraphs have been used as training sample, and they are classified into two types: templates and examples. Each of these sentences is labelled by using entities and the simple commitment in which it is contained. Because comments in response are the outputs of aims and goals, they are activated when a user registration matches an intent. They are comes in a multitude of formats, the much more popular of which has been plain text. Dialogflow, on the other hand, allows for full integration to apps that fit substance into card purchases, tables, checklist, and other product structures. As previously stated, organisations are buzz words that can be classified in a number of different ways. For academic purposes, generating an intent for each meaning is an option; this reason, data from students' interplay with the bot can be grouped not only using particular questions, and also using these broader constructs. [8]



FIG 1. FLOW CHART OF THE SYSTEM

Dialogflow: Dialogflow is a native tongue acknowledging platform that makes it simple to design and incorporating a dialogic user interface into your smartphone device, web application, gadget, bot, voice based system, and so on. You can use Dialogflow to provide fresh and exciting ways for users to interact with your product. Dialogflow can analyze a variety of customer inputs, including text and audio. It also can respond to the customers in a variety of ways, including text or synthetic speech.

ReactJS is an open source front end JavaScript library for creating user interfaces or Ui. React can be used as a foundation for developing single-page or mobile applications.

Data cleaning is the process of removing noise and inconsistent data from a database.

Data integration is the process of combining data from various sources. Data selection: In this step, data pertinent to the mining task is chosen.

Data transformation: In this step, data will be transformed into a mining-friendly format.

Data mining: In this step, intelligent methods for extracting data patterns are used.

Pattern evaluation: In this step, we focus on identifying important patterns that represent knowledge based on some measure.

Knowledge presentation: The mined knowledge is presented to the user using visualisation and knowledge representation techniques in this step.

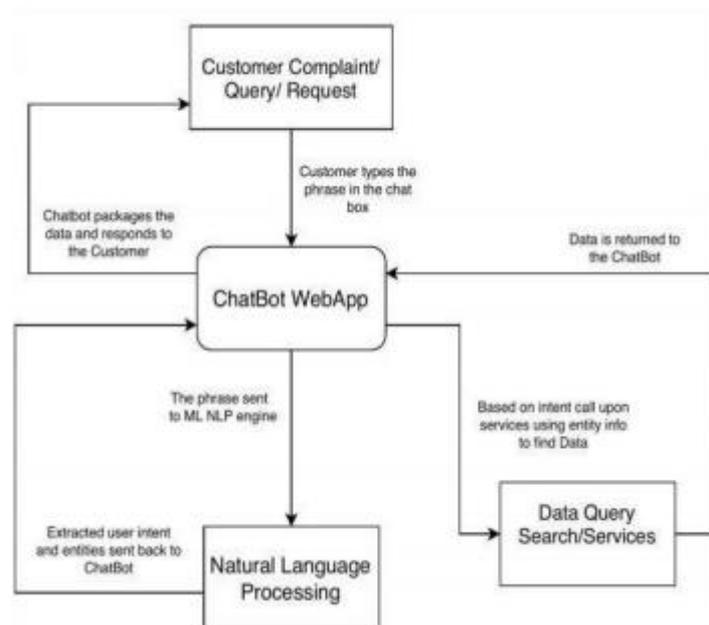


FIG 2. FLOW CHART OF THE SYSTEM

V. RESULTS AND DISCUSSION

Dialogflow is an amazing platform because it supports inclusion in the Assistant app as well as inclusion in over 20 social media channels such as Web Demo, Facebook, Slack, Viber, Kik, Twitter, and so on. This Chatbot is integrated into the institute's website by selecting Integrations in the left panel and generating a web demo for the current agent. The following are the steps to creating a chatbot: 1st step: Analyzing the Preset Intentions Dialogflow includes basic

presets including a Default Greeting Intent and a Default Fallback Intent. This is simply instructing the bot on what to do when they are greeted or when the bot seems unable to reply their query. From the drop-down menu, choose "Default Welcome Purpose." Step 2: Making a Default You can generate a new response to Welcome Purpose. When an expression is entered in the "Responses" section, the responses for MCA Department Bot are chosen at random. And custom response enables us to create a unique welcoming response for the Department bot. Step 3: Developing New Intentions We're developing an MCA Division Bot to assist users with a few answers: "How long is the MCA course?" "When do colleges begin?" "What are the class times?" We'll create Intents for all of these query forms and then initialise them with the appropriate Expressions and Responses. To create a new Intent, simply click the '+' button next to the "Intents" click inside the left menu. When going to name an Intent, keep it simple and easy to remember. Step 4: Including the Response By including responses but rather expressions such as "It is a three-year course with a two-year lateral entry," "we are open Tuesday morning through Sunday from 6 a.m. to 11 p.m.," and "classes begin at 8 a.m. and end at 5 p.m." After that, set the Intent to "end of conversation" at the Training phrases. Integration is the fifth step. The following paper indicates how to incorporate the MCA Department bot: To begin, go to the "Integration" section of the left column and turn "Web Demo" On, then tap it to enter.

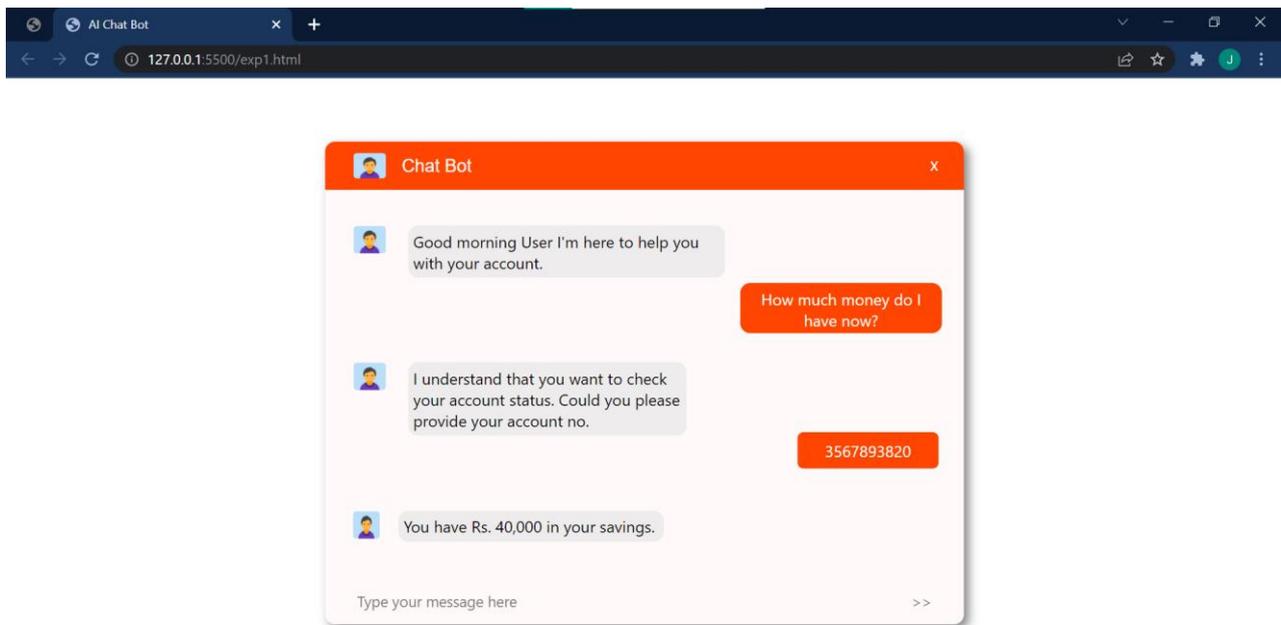


FIG 3. RESULT OF THE CAT BOT

VI. CONCLUSION

Chatbots are now widely used for a wide range of business, personal, and educational reasons. They developed a new way to reach customers by utilising digital technology such as Artificial Intelligence. Chatbots are simple to use, and anyone who can type in their speech on even a desktop pc or in a phone or tablet app can use them. This paper introduced an intelligent chatbot based on a comprehensive set using Web Demo and Search DialogFlow. The MCA Dept chatbot combines the benefits of similar models such as Voice Recognition, Frame of reference Recognition, and a User-Friendly Interface. And the person who wrote this article would like to deduce that the implementation of the MCA Dept chatbot was indeed beneficial for students who are interested in learning more about the department.

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