

Development of Telegram Major Robo Using Python

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Abstract: In this pandemic where everyone is facing physical and mental illness, how to assist without any human interference a chatbot is an artificial intelligence software that communicates via audio or text. This software is employed to perform tasks like quickly responding to users, informing them, helping to get products and providing better service to customers. The chatbot system is popular, thus it's found on a lot of websites. One does not have to wait to speak with a customer service representative, and they do not even have to look for shopping on websites while using a chatbot. We will develop a Telegram bot in Python using the Telegram API in this project.

Keywords: Major Robo, Telegram API, machine learning, intelligent, pattern matching, NLP, AI System

1. Introduction

Chatbots are not a new invention. They are artificial intelligence programmes that can comprehend, process, and communicate with humans while doing specialized jobs. A chatbot, for example, is frequently used as a helpdesk representative. These developments have brought us to a point where conversing with chatbots is as natural as conversing with another human. Most businesses now employ chatbots to communicate with their consumers and respond to their questions. Since everything is becoming online and people can't reach out to other people. So, we created this bot for resolving the queries. And we named our telegram bot Major Robo. This project will assist for learning purpose also without any interference from humans. Our project has been developed using python and telegram API as its prime technology.

2. Description

A CHATBOT is a standard programme with a database, an application layer, and APIs for interacting with other external administrations. Bots, on the other hand, are unable to grasp the customer's intentions. It's a fairly frequent issue that needs to be addressed. Bots are often programmed based on knowledge that is only known to them in the past. As a result, most companies use chatbots that keep track of conversations so that they may better understand the behavior of their customers [5]. These logs are used by developers to figure out what questions

Customers are attempting to ask. Developers use a combination of machine learning techniques and models to coordinate with their clients' questions and respond with the best possible solution. A customer service chatbot contains a large number of conversation logs, which help the chatbot figure out what questions to ask and how to respond. Ordinary customer care representatives, on the other hand, are given written instructions to follow. Chatbots work on the basis of three classification systems:

1) Pattern Matches

The pattern corresponds to the grouping of texts used by bots, resulting in a suitable response to consumers. The "Artificial Intelligence Markup Language" is the standard structured representation of these patterns.

2) Natural Language Understanding (NLU)

The process of turning a user's speech or text into structured data is known as natural language processing. It is used to offer appropriate responses to customers. To create a chatbot, you must be extremely clear about what you want from it. They're frequently created for commercial systems, such as Net Banking sites, to manage customer Q&A. Smart assistants, such as SIRI, Google Assistant, Alexa, and Cortana, are another form of chatbot that has been widely created and deployed. A simplified class diagram [5] of a chatbot demonstrating basic functions is shown below:

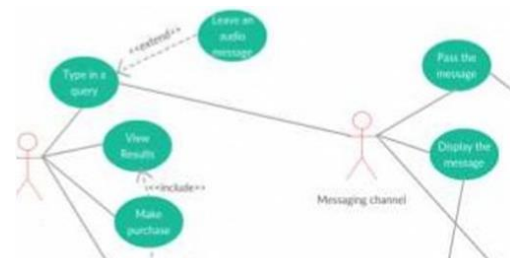


Fig. 1. Basic functionality of major robo

3. Related Work

1) Chatbots: Are Chatbots Actually Useful?

Author: Bayan Abu Shawar, Eric Atwell

The paper is essentially focused on an educational paper

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highlighting some case studies and including a quick history of chatbots that extends back to the earliest experiments like ELIZA (c. 1966). The paper is predicated on making a chatbot using AIML patterns with ALICE [1].

2) A Platform for Collecting Human Chatbot Interactions on the Web

Author: Lue Lin, Luis Fdo. D’Haro, and Rafael Banchs. The article shows a web-based framework with a chatbot design as a figure. In HAI 2016, Lue Line, Luis Fernando D’Haro, and Rafael E. Banchs presented the online Chat, a crowd-sourced project to capture and analyse human chatbot encounters. [2] Dr. Richard S. Wallace presented a technical exposition of Artificial Linguistic Internet Computer Entity in this article. (A.L.I.C.E.) also as AI terminology (A.I.M.L.), which are set within the background by philosophical and historical ruminations occurring on human consciousness. [3]

4. Shortcoming of Major Robo

1. One of the major drawbacks of chatbots is that they are unable to comprehend human context. Because Chatbots are built in such a manner that they can only execute activities that are taught to them, this conduct frequently results in an unhappy client.
2. Chatbots can only respond to questions using data that is already stored in the system. One of the unpleasant realities is that chatbots have no ability to do research.
3. Chatbots have a number of serious flaws, one of which is their inability to comprehend human context. Because Chatbots are built in such a manner that they can only execute activities that are taught to them, this conduct frequently results in an unhappy client.
4. Chatbots can only respond to questions using data that is already stored in the system. One of the unpleasant realities is that chatbots have no ability to do research. They are unable to do research and provide answers on any issue.
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6. The lack of emotion in Chatbots is one of its primary drawbacks. They are unable to connect with consumers since they are unaware of the importance of any issue.

5. Proposed System

We created an interactive chatbot in Python using the Telegram API, and the workflow of the proposed framework is depicted in Fig-5.1. Typically, user discussions begin with broad queries. AIML check is performed initially on user enquiries to determine if they are AIML scripts or not. AIML is defined by general questions, queries, and welcomes, all of which are answered using AIML forms. The AIML-developed chatbot will determine the category that includes the query pattern after the bot-user inputs the question into the chatbot. In this case, the bot-user is expected to type within the query in a certain manner. The template of the category that includes the response is returned to the bot-user after the query pattern is

matched [6].

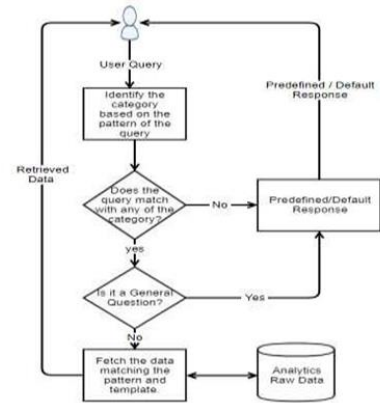


Fig. 2. Proposed model of major robo

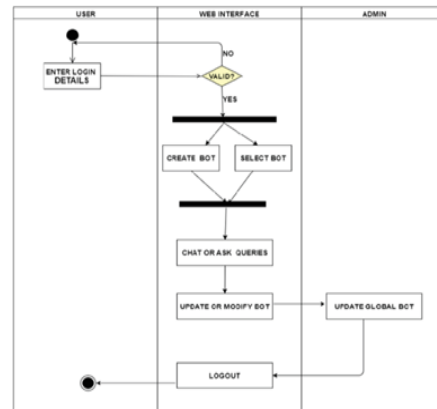


Fig. 3. Major robo credential check

6. Implementation

This section covers the design and implementation of a different module of the bot, which contains the design of another PYTHON module.

```

C:\Users\win10> pip install requests lxml BeautifulSoup4
Collecting requests
  Using cached requests-2.25.1-py2.py3-none-any.whl (61 kB)
Collecting lxml
  Using cached lxml-4.5.2-cp38-cp38-win32.whl (3.4 MB)
Collecting BeautifulSoup4
  Using cached BeautifulSoup4-4.10.0-py3-none-any.whl (107 kB)
Collecting certifi
  Using cached certifi-2020.12.5-py2.py3-none-any.whl (149 kB)
Collecting chardet
  Using cached chardet-3.0.2-py2.py3-none-any.whl (175 kB)
Collecting urllib3
  Using cached urllib3-1.26.4-py2.py3-none-any.whl (356 kB)
Collecting idna
  Using cached idna-2.10-py2.py3-none-any.whl (59 kB)
Collecting soupsieve
  Using cached soupsieve-1.2-py3-none-any.whl (34 kB)
Collecting python-version
  Using cached python-version-3.0.0-py3-none-any.whl (12 kB)
Installing collected packages: requests, lxml, BeautifulSoup4, certifi, chardet, urllib3, idna, soupsieve, python-version
Successfully installed BeautifulSoup4-4.10.0 certifi-2020.12.5 chardet-3.0.2 idna-2.10 lxml-4.5.2 python-version-3.0.0 requests-2.25.1 soupsieve-1.2 urllib3-1.26.4
  
```

Fig. 4. Installation of request lxml packages

```

import random
import time
import sys
import os
import re
import json
import requests
import lxml.etree as etree
import BeautifulSoup4 as BeautifulSoup
import certifi
import chardet
import urllib3
import idna
import soupsieve
import python_version

def main():
    # User login details
    user_login_details = {}
    user_login_details['username'] = input("Enter Username: ")
    user_login_details['password'] = input("Enter Password: ")

    # User login validation
    if user_login_details['username'] == "admin" and user_login_details['password'] == "admin":
        print("Admin login successful")
    else:
        print("Invalid username or password")

    # User chat or ask queries
    while True:
        user_query = input("Enter your query: ")

        # User chat or ask queries validation
        if user_query == "exit":
            print("Exiting chatbot")
            break
        elif user_query == "help":
            print("Type 'exit' to exit the chatbot")
        else:
            # User chat or ask queries response
            print("I'm sorry, I don't understand that. Please try again.")

    # User chat or ask queries response
    print("Thank you for using the chatbot. Goodbye!")

if __name__ == "__main__":
    main()
  
```

Fig. 5. Implementation of Major Robo program

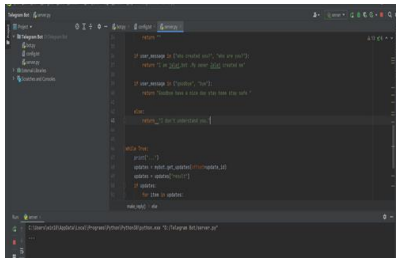


Fig. 6. Execution of Major Robo program



Fig. 7. Major Robo Interface

The Translator API Using APIs like Weather, Sports, News and Government Services, the chatbot are going to be ready to answer the questions outside of its dataset and which are currently happening within the world.

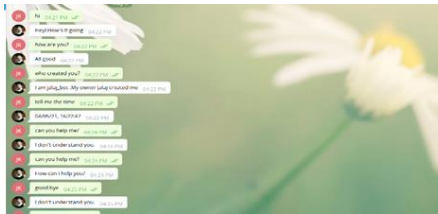


Fig. 8. Conversation of Major Robo

7. Conclusion

It was fascinating to see how the participants engaged with

the chatbot and what they said about it later. Our findings point to the possibility that a chatbot may be a useful option for serving as a helpful friend and answering questions. We have created a chatbot that can communicate with people in this project. This chatbot can respond to questions in the textual user input. We touched on some theory in the project when developing the chatbot, but this needs to be given more attention for more validity. We cannot argue that consumers trust a chatbot as much as they trust a human being, despite the fact that the participants believed the information provided in this experiment. With that stated, we feel that some of our findings may provide some insight into how a small group of people perceive using a chatbot to obtain information. In future work, we will make a chatbot that's supported AIML and LSA. This technology will enable a client to interact with a chatbot more fashionably.

References

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