CREATE A CHATBOT PYTHON

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Phase-1 Document Submission

Project: Create a Chatbot Python

OBJECTIVE:

A simple chatbot in Python is a basic conversational program that responds to user inputs using predefined rules or patterns. It processes user messages, matches them with available responses, and generates relevant replies, often lacking the complexity of machine learning-based bots.

PROJECT TITLE : CREATE A CHATBOT IN PYTHON

ROBLEM DEFINITION :

To build a chatbot in Python, you have to import all the necessary packages and initialize the variables you want to use in your chatbot project. Also, remember that when working with text data, you need to perform data preprocessing on your dataset before designing an ML model.

WHY USE CHATBOT IN PYTHON :

Fundamentally, the chatbot utilizing Python is designed and programmed to take in the data we provide and then analyze it using the complex algorithms for Artificial Intelligence. It then It then delivers us either a written response or a verbal one.

DESIGN THINKING FOR CHATBOT :

I have been extremely lucky to get a chance on designing a chatbot for one of our clients and the learning in the process has been massive. Most of the notions that I thought were true were discarded by research and a whole new world of possibilities just opened wide. Below, I have shared some of my crucial understandings along the path of designing a bot, hope you like it.

1.Rule-based approach

2. AI-based approach

1) RULE- BASED APPROACH :

- This is a static approach (relatively) to the creation of chatbot, wherein there is a pre-fixed set of rules that act as guiding parameters, based on which the bot responds to user input (queries, etc). Depending on the requirement, these rules can range from simple, to very complex.
- This approach however, does have drawbacks that may affect user experience, if applied in a wrong way. Although this is the more straightforward of the two approaches, there is a lack of efficiency in the overall functionality of the bot.

2)AI- BASED APPROACH :

- This approach enables the bot to be more dynamic in its responses, as well as functionality. The process itself is much more complex as compared to the above, as it requires that the chatbot be connected to an AI.
- The driving forces behind this approach are advanced data analytics, API (Application Programming Interface) integration, and the subsequent machine learning that takes place.

- In this way, the bot is able to learn dynamically, and modify its working (responses) in order to provide a more efficient, personalized user experience.
- You should note however that, both the above approaches have their merits, and their applicability is conditional solely to developer requirement(s).
- Given that chatbots are a fast-growing concept today, I feel it necessary to arm you, with the basic facts related to the subject, and how and why the design of a chatbot is of utmost importance.

THE BENEFITS OF CHATBOT :

- Provide fast, 24/7 customer service.
- Offer more personalized experiences.
- Deliver multilingual support.
- Ensure more consistent support.
- Offer convenient self-service options.
- Provide proactive customer service.
- Deliver omnichannel support.
- Improve service with every interaction.

CHATBOT USING IN PYTHON :

Python is a preferred language for data projects, machine learning projects, and chatbot projects.

It has a simple syntax that even beginner developers find easy to read and understand.

We'll be using the ChatterBot library in Python, which makes building AI-based chatbots a breeze.

Step 1: Install Required Libraries.

Step 2: Import Necessary Libraries.

Step 3: Create and Name Your Chatbot.

Step 4: Train Your Chatbot with a Predefined Corpus.

Step 5: Test Your Chatbot.

CONCLUSION :

It is indeed a promising time for the entire AI industry, and by extension, for bots as well. The global chatbot market is set to grow at about 37% CAGR between 2017 and 2021. This meteoric rise in chatbot applications will cover nearly all major and minor businesses within the next 5 years. It is therefore that I would urge you to consider getting on the wave while it is growing, and reap the benefits of a timely investment, in the near future.