Project Scope and Schedule

Introduction

Conversations play an important role in everyday life. Conversation can be general which are used to generate fun or they can be used to solve queries. For any conversation in general at least two people are required. Conversation can also occur between a computer and a human. Such conversations can be achieved through chatbots.

What is a Chatbot?

Chatbot is made up of two words “Chat” representing conversation and “Bot” representing a robot. Hence a chatbot is enabling conversations with a robot.

Generally speaking a bot is any software that performs an automated task, however, we are interested in the class of bots that live online in chat platforms or on social media called chatbots.

In this context, there are many possible definitions and some confusion about what a bot is. This is partly because there are so many varied use cases for bots and these influence what people perceive a chatbot to be. The most intuitive definition is that a bot is software that can have a conversation with a human. For example, a user could ask the bot a question or give it an instruction and the bot could respond or perform an action as appropriate.

Types of Chatbots

To understand the nature of chatbot conversations it is important to understand that there are three types of chatbots:

1. Scripted ChatBot : These are chatbots whose behaviour is determined by rules.Conversations with this type of chatbot can only follow predetermined paths. At each step in the conversation the user will need to pick from explicit options to determine the next step in the conversation. How the options are presented to the user at each step in the conversation, i.e. whether they need a text, voice or touch response will depend on the features of the chat

platform and how the bot is programmed that the user is on and the design of the bot.

2. Intelligent ChatBot : Intelligent chatbots are built with artificial intelligence techniques. Artificial intelligence allows them to be more flexible in terms of the user input they can accept. They can accept free form input in the form of text or voice statements (but of course they are not limited to other forms of input if that makes sense). AI also allows them to improve the more that they are used. It should be noted however that although AI works very well in very limited knowledge domains, or for one off instructions, the actual intelligence of the bot is limited. It is extremely difficult to get a bot to "understand" context or ambiguity or to have a useful memory that influences the conversation.
3. Application ChatBot : Both scripted and intelligent chatbots can have graphical user interfaces.
4. As mentioned, both scripted and intelligent chatbots can have graphical user interfaces. Application bots is therefore not a separate category of bots per say. The fact that the bots can be interacted with using a graphical user interface is an important concept for chatbot developers. If a user can do the job they need to do more efficiently via a graphical interface then the bot needs to show a graphical interface at that point in the conversation.

Why chatbots are important?

Chatbot applications streamline interactions between people and services, enhancing customer experience. At the same time, they offer companies new opportunities to improve the customer engagement process and operational efficiency by reducing the typical cost of customer service.

To be successful, a chatbot solution should be able to effectively perform both of these tasks.

Virtual assistants

Virtual assistants are great for businesses; They can interact with customers and solve problems. Virtual assistants can save time, money

and require minimum human interference. Virtual assistants are scalable, meaning they can be used to handle multiple requests simultaneously, unlike the human counterpart. Customers will not have to wait for hours to get clarification or assistance. Virtual assistants can solve their problems instantly.

Problems

Virtual assistants can answer simple questions but require human intervention for complicated issues. The objective of a virtual assistant is to minimize human intervention, thus a virtual assistant must be tuned in such a way that it answers complicated questions without redirecting the customer to humans.

Proposed Solution

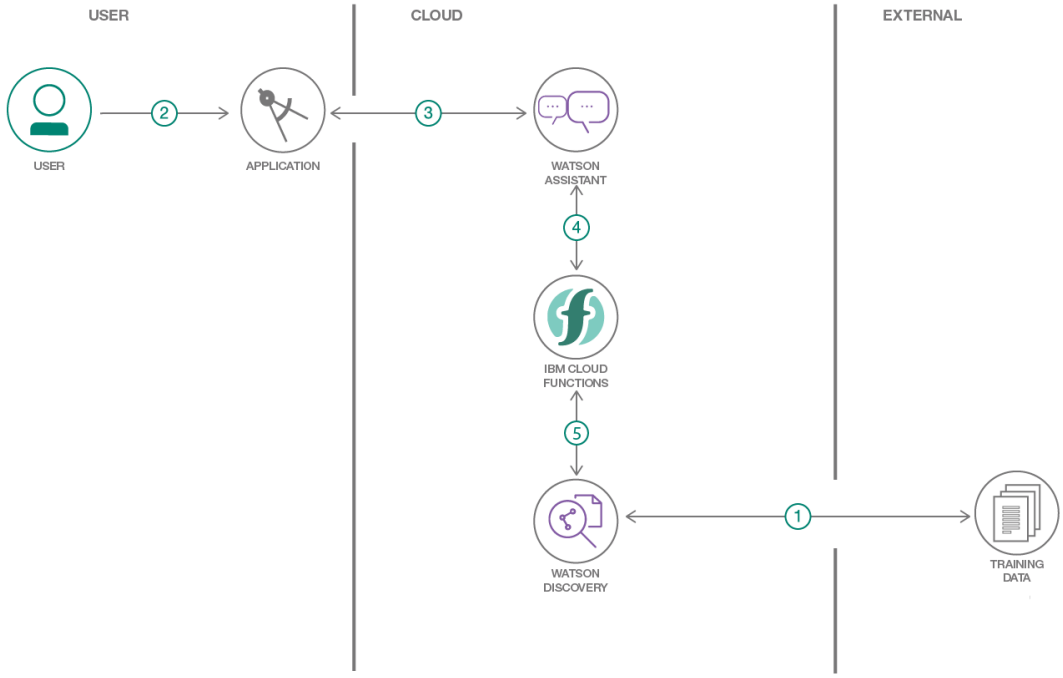
This can is done by making a virtual assistant that scans the manual and recommend the relevant page to the customer. This way, a virtual assistant could help the customer without the need for humans.

Flow

Watson Assistant can be used to make a virtual assistant that can interact with the customer, and Watson discovery is used to analyzs the text in the owner's manual to make the virtual assistant smarter.

The first step in the process would be to make a virtual assistant and train it with required intents and entities then Watson Discovery should be trained on the owner's manual, where it will the text and gather essential information. Watson assistant and Waston Discovery will interact with each other via Watson functions which is IBM's Function as a service (or Platform as a service without memory).

The customer will interact with the application that uses Watson Assistant if Watson assistant cannot answer the customers question it will redirect the query to Watson discovery via Watson functions.



Schedule

Week1- Watson Assistant

Week2- Node-Red

Week3- Watson Discovery and Functions

Week4- Putting it all together