

Smart Chatbot

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Abstract—Chatbots are poised to revolutionize User Interface design. Chatbots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most well-known chatbots currently are voice chatbots: Alexa and Siri. However, chatbots are currently being adopted at a high rate on computer chat platforms. This paper presents the design and development of an intelligent voice recognition chat bot. The paper presents a technology demonstrator to verify a proposed framework required to support such a bot by introducing an artificial brain, the Web-based bot generates customized user responses, aligned to the desired character. Questions asked to the bot, which is not understood is further processed using a third-party expert system improving the artificial brain capabilities for future generation of responses.

Index Terms— Artificial Intelligence, Virtual Assistant, Drag & Drop.

I. INTRODUCTION

User Requirements (UR) are one way to integrate end-users with a basic technical knowledge in the software development process. Instead of formally modeling the requirements of software, end-users write down which functions they expect from a software application. However, natural language allows incompleteness, vagueness and ambiguity in UR descriptions, which can significantly reduce the quality of the resulting software [GSB15]. While “ambiguity is the possibility of interpreting an expression in two or more distinct ways, [...] vagueness occurs when a phrase has a single meaning from a grammatical point of view, but still leaves room for varying interpretations” [GB17]. Although there are some (semi-) automated tools for the detection and compensation of deficits in UR [SJ15, Ban15, HB15] to detect and compensate deficits in UR by means of predefined strategies and indicators [BG18].

II. EXISTING SYSTEM DRAWBACK

- Humans have a limit to the number of clients they can handle at once. However, with chatbots, there is no such constraint and they can handle as many queries as required at once.
- Zero decision-making – Chatbots are known for being infamous because of their inability to make decisions.

- AI-based: These chatbots thrive on dynamic learning and constantly update themselves using various customer interactions. They are intelligent, of superior design, and offer better user-experience.

III. PROPOSED SYSTEM

This paper is based on smart chatbot system which will help us to develop chatbot. However, chatbots are currently being adopted at a high rate on computer chat platforms.



Fig. 1. Sample Proposed System

IV. SYSTEM ARCHITECTURE

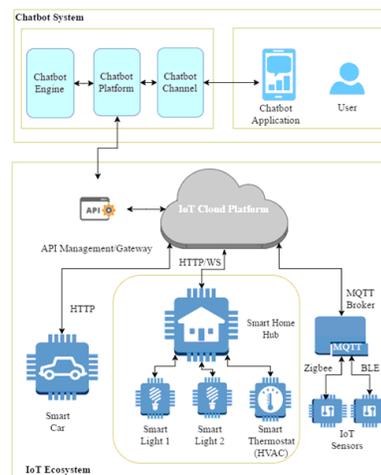


Fig. 2. Chatbot System

Chatbots are on the rise. Startups are building chatbots, platforms, APIs, tools, analytics. Microsoft, Google, Facebook introduce tools and frameworks, and build smart assistants on top of these frameworks.

Industry	Brands that have deployed Messenger Bots	
Restaurants	 Domino's	 TGI Fridays
Travel	 Kayak	 Expedia
Finance	 MasterCard	 American Express
News	 CNN	 Fox News
Sports	 Juventus FC	 NBA

Fig. 3. Messenger bots deployed brands

V. CIRCUIT COMPONENTS

The first-step in creating a dialogue act recognition system, is defining the relevant functions or the DA tag-set. This involves choosing labels that are general enough to be re-used in multiple tasks, specific enough to remain relevant for the target task, and clear/separable enough that there is little confusion for humans in labeling the functions of sentences in the training set. A number of tag-sets have gained prominence and are the most frequently used in chatbots: Dialogue Act Markup in Several Layers (DAMSL), Switchboard SWBD-DAMSL, Meeting Recorder, VERBMOBIL, and Map-Task.

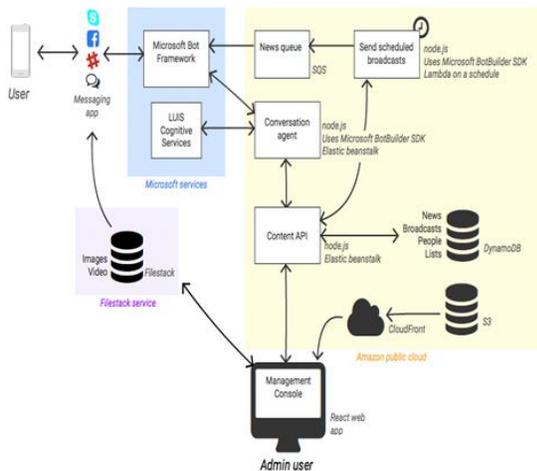


Fig. 4. Chatbot circuit components

- Homepage.
- Go to the profile of client.
- Find client details.
- Artificial Intelligence is the most supportive part of chatbot.

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top of these frameworks. Multiple blogs, magazines, podcasts report on news in this industry, and chatbot developers gather on meetups and conferences.

VI. IMPLEMENTATION AND OBSERVATION

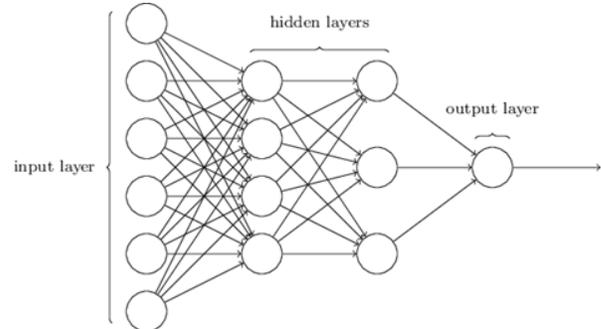


Fig. 5. Artificial Neural Networks

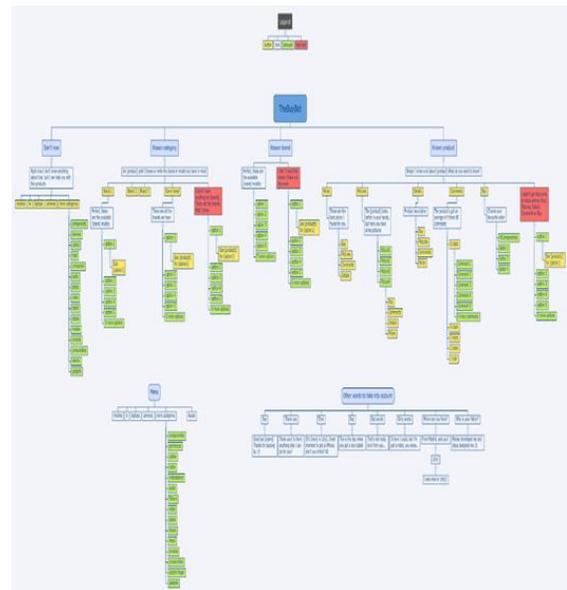


Fig. 6. Data flow diagram

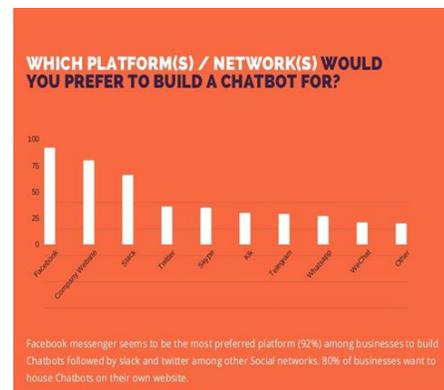


Fig. 7. Increase ratio of chatbot creator

The CHATBOT follows a rule based logic to handle various user requests and calls API services when providing the response to such requests. This framework simplifies the task of

setting up a server process which listens for incoming text messages. Since rule-based framework provide no AI capabilities to parse or classify incoming messages. We will use API services, such as Monkey Learn to perform more advance analysis.

VII. FUTURE ENHANCEMENT

Chatbots learn to do new things by trawling through a huge swath of information. They are designed to spot patterns and repeat actions associated with them when triggered by keywords, phrases or other stimuli. They seem clever, but they are not. They are adaptive & predictive in their learning curve. This means that if the input is poor, or repeats questionable statements, the chatbots behavior will evolve accordingly.

VIII. CONCLUSION

There is more to building chatbots and conversational UI than just plugging tools, services, and data together. It takes practice and a deeper understanding of underlying concepts to get the design right and build bots that give users a great experience. The user should be able to get the job done by having a conversation with the bot without having to think too much and with a smile on their face. Great conversational experience, the experience that the user gets when interacting with or at the thought of doing so, is what we should always aim for. And only with practice and mindful design can we achieve that.

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