

## Chatterbot : Smart Excel Crawler

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### 1. Abstract

Modern technology aims at making people's life easier. Being in digitalization people at banks, shopping malls, Institutes and colleges, Government, Research Lab etc. who don't have prior knowledge of excel can easily get their work done by using this chatterbot. To find any data in an excel it requires a lot of time and effort. Also the user requires a good knowledge of excel. After, rigorous searching any data one has to find it again after closing the application, there is no history option. People prefer voice search and voice command over typing the whole text. Creating a Chatterbot using which one can crawl the database and give required information to the user. This chatbot uses the power of NLP to process the user text to give the better result.

### 2. INTRODUCTION

Chatterbot is an automated crawling technology which help people to find data from an excel sheet more efficiently, ultimately saving a lot of time and also not requires knowledge of excel. It set your hand free from doing repetitive searching by giving history option within it. Also there is voice command feature and user not require prior knowledge of excel. To find any data in an excel it requires a lot of time and effort. Also the user requires a good knowledge of excel. After, rigorous searching any data one has to find it again after closing the application, there is no history option. People prefer voice search and voice command over typing the whole text. Creating a Chatterbot using which crawl the database and give required information to the user. This chatterbot uses the power of NLP to process the user text to give the better result.

2) Django – It is a python web framework that is used for development of websites. It is free and open source and easy to build all type of website

We used Django for User Interface development in our chatterbot project.

3) NLU – natural language processing is used interaction between human language and computer. Voice technologies like Siri, Alexa etc. used NLU software for conversion human command to computer language.

We used NLU of for interaction between our users to the bot.

4) Python – it is high level programming programming language, it is object oriented and syntax are easy to use.

We used python for back end development of chatter bot.

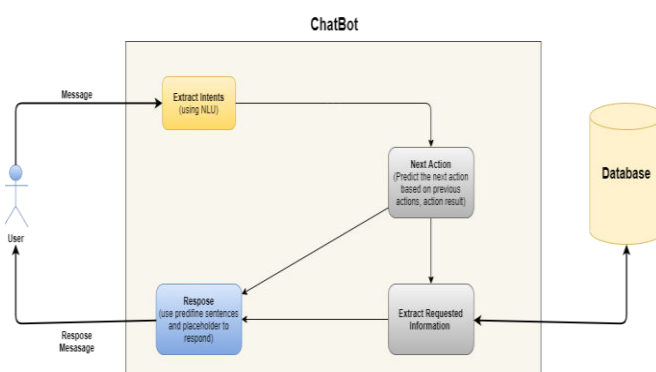


Fig – 1 : Architecture

### 3. Chatterbot Technology

1) RASA – It is a machine learning framework which is open source and used for making chatbots. It has two main parts RASA core and RASA NLU. RASA core is used for holding messages and decides what to do next, while RASA NLU used for understanding the messages.

We used RASA for the development of our chat bot.

#### 4. Scope

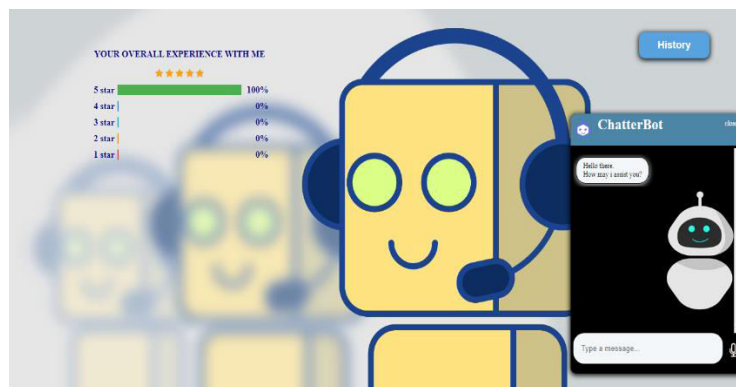
- Give flexibility in dealing with customers as it as inbuilt history option which saves the data of regular customer.
- It will increase service reliability of customer.
- The target audience for chatter bot is the one who don't know how to operate ms excel , with the help of this they can find the desirable data from the excel sheet without even opening it.
- It can be used government offices and other institutes and research lab where people can easily find the required data without opening and typing the command in excel .

#### 5. Working

- Firstly, you have to take an excel sheet and put it inside the bot that means you have to train the bot. In this way bot will remember all the data inside the sheet. It takes few seconds to train the bot and no matter how big is excel sheet
- Secondly, the speed of training is directly proportional to the configuration of laptop or pc , the higher the configuration the higher will be the speed .
- After training the bot, you have to go to the user interface and there in search box , you can find any query related to the excel sheet.

#### 6. Limitations

- There is no option for update in the original data sheets , we have to again train the updated excel sheet inside the bot to see the updated data on the user interface.
- It will work only for excel. As it has target audience who do not know how to run MS Excel .
- While operating on a sheet, changes made after uploading will not be access able by chatbot.



**Fig -2 : Working**

#### 7. CONCLUSIONS

Chatterbot will reduce the time and effort for users who work with data sheets both basics and advance and also it will satisfies those users who don't have technical knowledge. It will be a industry ready product for people of MNCs, Government, Researchers, Marketers and many more. With the help of AI based chatbot people can easily find

data as their requirement which reduces their efforts and also time. As in today's world data are in big numbers which not easy to handle by a common man. So, it requires special softwares and also persons who can operates those softwares which will ultimately increases the cost. So this Chatterbot is an exemplary solution of such problems. Currently it will only operate on excel but we can develop that for other softwares also and can for heavy data also.

#### 9. ACKNOWLEDGEMENT

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## 9. REFERENCES

The content for the development of this report and project are taken from the following sources:

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