**Specification**

**Description**

A Chat bot is a computer program that simulates human conversation through voice commands or text chats or both. This feature that can be embedded and used through any major messaging applications. AI enables computers to analyze and understand the human language.

A simple architecture for such a bot would be like the following,

Output response

Parse input

Determine intent

Input natural language

**How AI-BOT enhance the way of questioning ?**

* AI-BOT detects and corrects grammar errors.
* Spell check feature is enabled in AI-BOT.
* Removes any adult contents used in questions.

**How AI-BOT respond to User/Customer queries?**

**Link :** For FAQs, response will include links to a KB/UG followed by short description of the topic.

**String :** For release related queries, response will be a normal string output.

The following will be considered as a future enhancement of AI-BOT.

**Address, schedule, map :** For webinar/conference related queries, AI-BOT will provide the address, timings of the event, and also AI-BOT will provide the location based on coordinates in map.

**Options :** For anonymous queries, options will be displayed. For example, if customer asks for release details without mentioning the product. AI-BOT shows option for customer to choose.

**Key features/Advantages of AI-BOT**

* Reduce the Incident/Forum count.
* Ease of customer access as it’s like a normal chatting application.
* Versatile to multiple languages.
* 24/7 availability to answer for simple customer queries.
* Provide solution for queries even with least the possibilities.

**Architecture**

The architecture of AI-BOT is as follows,

Requests JSON

Sends only keys

Input queries

**DB**

**BRAIN**

**BOT**

**UI**

Displays Result

Feeds JSON

Retrieves JSON

The following architecture explains the functionality of Brain.

**INPUT**

**DECISION MAKING**

**SEARCH MATRIX**

**OUTPUT**

**How is AI-BOT helpful for a company?**

AI-BOT will be very helpful in customer support. Support engineers face incidents/forums based on general queries. The answers to all these queries will be static and are repeatedly asked. Our AI-BOT answers to these repeated query like a normal end to end chatting. Thereby improving the quality of customer support.

**How AI-BOT is helpful for Customers?**

AI-BOT is an interactive platform, to answer the customer queries. Normally, a customer who needs assistance would wish to have it immediately. Our AI-BOT fulfills this customer’s desire. AI-BOT replies the solution in seconds. AI-BOT saves customer’s valuable time, which would be the main requirement a customer would expect from support.

**How AI-BOT improves a company’s support quality?**

AI-BOT answers the customer and if the customer finds the response satisfying then he/she will not be creating incident/forum. Hence, our support engineers will have to work only on complex queries. Thereby saving customer’s and engineer’s time. Our AI-BOT will serve as a helping hand to our support engineers to handle normal and repeated queries.

**How important are chat bots for customer service?**

* Although a chat bot cannot handle all customer queries, it can handle the **repeated queries.**
* A chat bot makes it **easy and fast to get answers** for queries because of its convenient messaging like service.
* A chat bot **reduce the cost** for customer care by a company.

**Future Enhancements**

**Bot Server Feature Enhancement**

**1 . Pattern Match Searching**

Pattern match searching is to simplify our bot training. It helps to minimize the bot database. Also, bot can understand different question in single pattern.

**Example Pattern Question :** Sample for <component\_name>?

**Input :** Sample for Grid

Bot can understand that it is a pattern string and gives output.

**Output :** Provide the link for Grid Sample,

**2 . Recognize Customer Satisfaction**

Bots can’t recognize user satisfaction, to overcome this we can add a suggestion to know whether the given information is helpful to the users.

**3 . Multiple Search Result**

In some cases, customer would expect multiple search results related to the given input. In such cases we can provide more options to get all the relevant search results to the search page.

**4 . Recognize Grammar Questions**

Some customer may provide the input like “Are you Okay?”. We need to process all these kinds of questions. Hence, understanding the grammar is more essential to an AI-BOT.

**5 . Deep Learning**

Deep Learning is an essential feature for AI-BOT, because AI-BOT can learn from the customer questions and learn which data has high value. We can use deep learning to overcome the below cases.

* Handling unknown inputs.
* Decision making to provide information to user with high priority results.
* Understand the data value and help customer.

**6 . Decision Making**

AI-BOT need to understand question/expressions and categorize the questions to get the result from the respective knowledge base.

**UI Feature Enhancement**

**Loading Google Map, Scheduler** - For webinar/conference related queries, AI-BOT will provide the address, timings of the event, and also AI-BOT will provide the location based on coordinates in a map.

**Text & Speech Recognizer** - Text Recognizer understands the given text and it generates synthesized audio output with appropriate cadence and intonation. Speech Recognizer converts the audio stream to text.

**Website SEO Report** – For web address related queries, AI-BOT will provide the link with short description and website ranking.

**Express Bot Reply to User** - For anonymous queries, AI-BOT will react or express by stickers or smiles.

**Summary**

**Build :** Created an environment for the AI-BOT application to run and compile.

**Brain :** Designed the application logic of AI-BOT by which AI-BOT can accept the input (text/Voice) and process the results based on the accepted input.

**UI :** Provided a simpler interface for the user to work with the application.