



## RE-DEFINING THE USER EXPERIENCE WITH BOTS - A POINT OF VIEW

## Abstract

Chatbots have disrupted the way human conversations on selling, buying, enquiring, and complaining and a host of other functions are perceived. The huge shift in technology that has changed the way people interact is evident in every walk of life. Messaging technologies further aid its users to use chat for almost anything and it is truly perceived as a quick and easy platform for communication. This coupled with the advancements in AI and cognitive technologies / services, machine learning and various levels of automation made Chatbots very popular and in vogue. An important part of the Chatbot design process is to account for Chatbot UX, because it is essential to enable customers to get accustomed to it and eventually enjoy using it. This paper illustrates a point of view on key areas of focus to be considered, while designing and developing Bots to re-define the overall user experience and enable bots to be enterprise friendly.



The overall process of enabling bots for an enterprise involves a lot of phases and stages prior to getting into the actual design of the bot. Essentially, the whole purpose of a bot is to solve a specific problem or achieve a specific goal. So the first and fundamental step will be to begin with 'identifying the potential/ goals' for the enterprise. Potential in terms of appetite of the organization to use bots and goals in terms of the pain points they seek to address with the bots and the end goals. In the overall engagement to implement bots in an organization, once the goals are defined, the next step will be to understand the 'organization landscape' and make recommendations based on technological appetite as well as capturing of requirements and user scenarios/ stories. This could be in a consultative manner, with market analysis and experience being used to arrive at requirements or the key goals resulting in requirements.

However, once these fundamentals are taken care of, the overall process of design begins. At this stage there are very many aspects to be taken care of to ensure that the bots that are developed are genuinely usable. While maintaining a bot's functionalities is key, it means little if the Chatbot UX design is poor. It is very important to get user acceptance for the bots in an enterprise and ensure that the

bots are inviting, good to use- for new and seasoned users and depending on the function, even fun. It is imperative to focus on the fact that bots are meant to enhance the user experience with an enterprise instead of and designing a bot that is user

friendly and efficient is certainly a critical aspect. Let us consider few design principles and UX checklist, which can help in the overall design and development of bots with emphasis on re-defining the overall user experience.

### The Welcome Message and More...

The first message a user will view, and what kick starts the overall experience is the Welcome Message. It is imperative to have a superb welcome message that not only serves as a greeting message but, immediately sets expectations for the user and makes it clear which functionalities the Chatbot will cover. Ideally most Chatbots cover a minor scope or even if not minor or small at least a defined scope, within each bot, so it is very important to make the

scope clear at the very beginning, so that users don't proceed to crash the bot with everything it is not designed to do. It is key to understand this is not just a greeting message, but actually a reminder to users on where they are what they can do and what they are doing.

While working on the design of the bots and the scripts for the conversation, it is thus required to design a strong and comprehensive welcome message that is straight forward to understand, clear in its boundary and welcoming in its greeting.



Hi There! Let's get started. I am a News Bot and I will send you the top stories of the day. You can tell me what you want to know more about, for example you can type "sports", "politics", "entertainment".

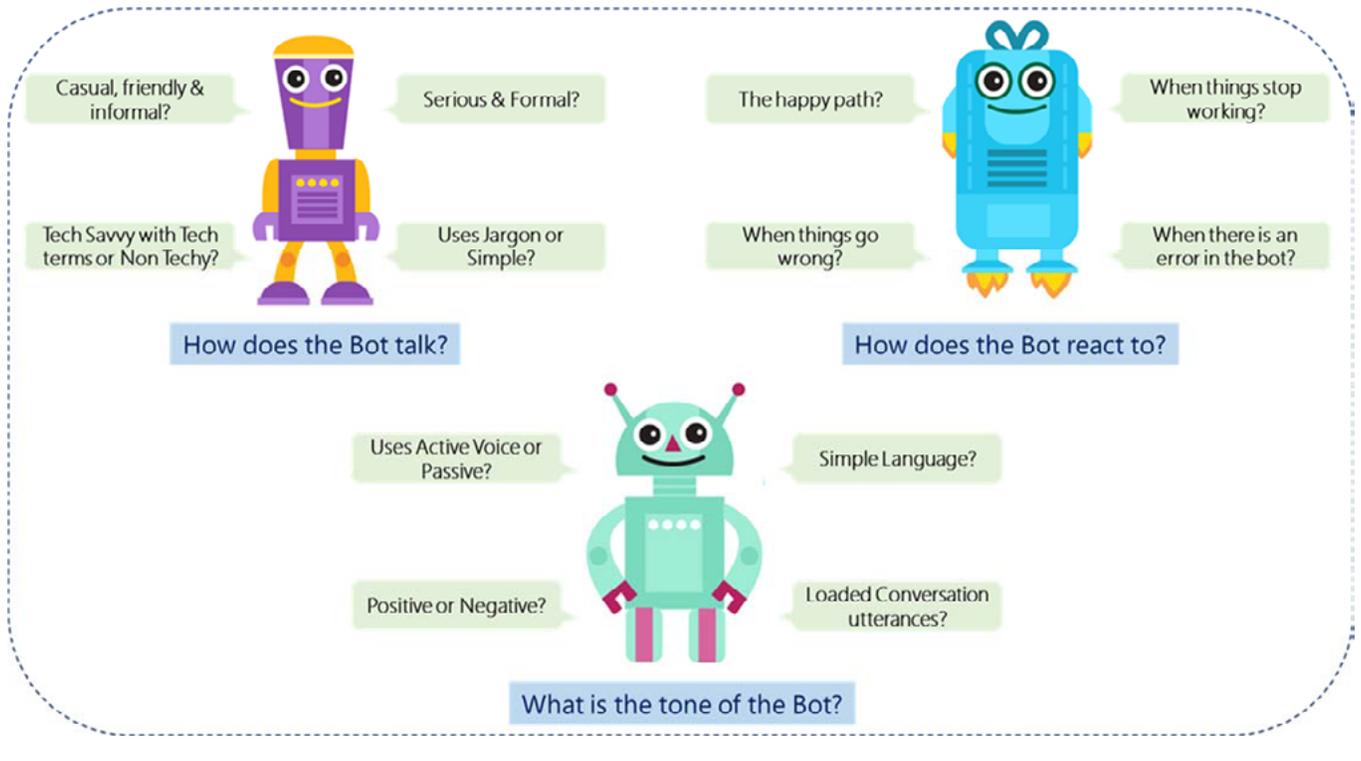
## Give the Bot a Personality

Fundamentally, it is not mandatory to give the bot a persona. However creating a persona or a personality, ensures consistency in the way interactions and responses are scripted. In enterprise scenarios, the bot personality would have to be designed keeping in mind the company ethos, brand guidelines and the type of users it would interact with.

While the voice a bot uses is anyway dependent on the channel being used for the chat, the tone of the bot in conversations needs to be defined. Considering, the conversation and interaction is happening via chat, the overall impact on users is really high, and if well designed, users tend to grasp the conversation as something real. This makes it fundamental, to work on the Chatbot voice and tone, the bot's

response, maybe even humor and overall personality. It is also necessary that the personal dialogue is not overdone and is more or less brief and productive. Too little personality and the bot will be mechanical, too much and it will be distracting.

While working on the scripts for the conversation, key points about the tone of the bot contribute to the overall bot personality design.



## Keep the Conversations Simple

The idea of using a bot is often to achieve the overall task faster and with more automation. With this in mind, keeping the conversation and questions simple is important. Complicated/ Lengthy interactions will make the experience complex for users. The conversation should be simple, with focus on the shortest path to achieve the goal. It is also vital to set realistic expectations, in terms of anticipating the kind of detailing users might provide in their input, while designing the conversation. Keeping this in mind, the responses from the bot

should be designed in such a way that it can intelligently handle different or unexpected responses. Using simple language and not packing too much information or instruction in a single utterance is very important.

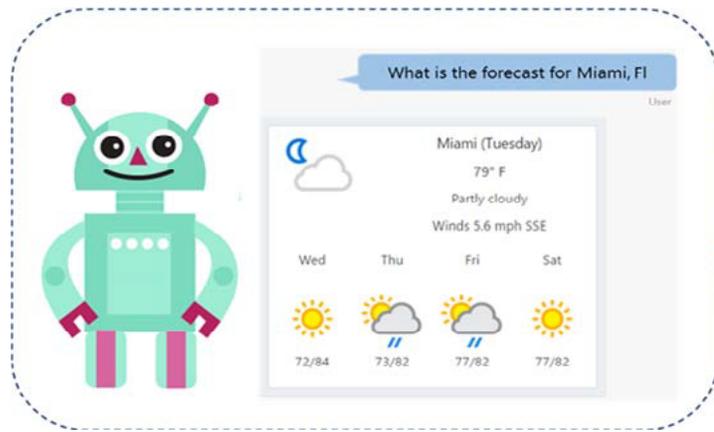
While designing the conversation flow, surely it has to be thought of from a human perspective and a realistic conversation point of view, in terms of what type of users will interact, what they might have seen on the company prior to this, the channels they may use and their purpose. The user is trying to accomplish something and is not there just to chat, so ideally the conversation should be simple enough

to get completed as quickly as possible. Repetition should be avoided in the entire conversation in terms of questions and statements from the bot, and this means, the intelligence would have to be amplified to remember and trace back to details shared in the conversation. Keeping the interaction simple will also facilitate a cleaner traceability overall. Natural language processing and artificial intelligence are simply not as accomplished at managing human-like conversations as humans are, so it would be advisable to know your limitations and know when to direct to a human/ website. Needless to say, while doing so, the design must retain entries from the bot.

## Rich Controls

Any user experience is enhanced with a great UI and this definitely applies even to the Bot experience. Using rich controls while designing the bot, enables the bots to be more intuitive and engaging for the users. Rich user controls are common UI controls such as buttons, images, carousels, and menus that the bot presents to the user and the user engages with to communicate choice and intent. Keeping in mind that bots are meant to solve the user's problem in the best/quickest/easiest manner possible, enabling rich and engaging controls for users to use and reducing the need to type, can augment the experience.

When designing a bot, it is essential to enable strong UI elements and not dismiss these UI elements as not being "smart enough." Use of more adaptive cards, inputs forms, interactive summary views, button clicks, pictures and controls and very less typing can improve the experience and also keep the conversation within the boundary and scope of the bot.



This also makes the entire experience less error prone, given that typing is minimized and there is no need to process typos, prepare for varied ways of user response as well as training the bot to handle users who are just trying to break it. The design of the bot, should also incorporate UX elements based on ways that users will likely prefer to use in bot interactions, given the specific use cases that it is intended to support.

Having said this though, it is important that the bot design doesn't go overboard with rich controls and menus. The key is

to choose the right mix of smart UX & UI elements based on envisaged user preference, the channel being used & the nature of the use case. Ultimately it is a conversation interface and something that a user is choosing to chat with. So a right blend of controls that nudge the user to interact and respond with the right information, as well as giving the user the freedom to type and enabling the bot to be intelligent enough to process both, is what will guarantee a stronger and holistic user experience.

## Focus on the conversation flow

Probably one of the most significant principles to be deliberated while designing a bot and aiding a robust user experience, is the design of the conversation flow. This may not be an aspect that is at the top of the consideration list when design and user experience are spoken about, but it is in fact the crux of the user engagement. The bot design should take into consideration the expected conversation flow end to end. Every possible situation on every step should be thought through → which interaction component the user will be using, what will happen if the users have not understood a step or misinterpreted a step, such as "What if they want to go backwards," "What about skipping steps?" etc.

While designing the bot, different aspects need to be kept in mind such as what the bot doesn't or cannot know, misunderstanding in messages and of course the happy path. The entire flow of the conversation needs to consider how to handle complex responses from the user and scenarios where the users are unable to understand the flow of the conversation or the intended direction of the bot. Users certainly do not want to be stuck in a deadlock situation where the bot doesn't understand what they want, so ultimately the bot should have a conversation flow that guides users to the goal, and build in ways to lead the user to the end point even if the bot doesn't understand. So error messages also should be empathetic and help to move forward.

## Prepare for errors and recovery

Every bot designer likes to believe the bot is going to be great and error free. While taking immense effort to ensure the bot is error free, is in fact an implicit design principle, it is still required to prepare for errors and unforeseen responses from the users. When a user is interacting with a bot and the bot is unable to move further or understand the users conversation, the last thing the user wants is to hear or see the bot mention 100 times that the bot did not understand the user. What's next and how do I proceed? In traditional GUIs, it is natural, for users to look for a home button whenever they want a fresh start. This is what the user needs to essentially be told how to do.

Errors in a bot experience can be of different types. The first scenario to be considered is when the framework or the technical code supporting the bot fail. Seeing errors like response not found or stack trace error etc., make no sense to the user and the bot has basically lost the user at Hello, with this kind of error message. Giving the user an option to reset or restart or start over or some kind of help option, will guide the user out of this situation and even enable the user to restart the process.

The second scenario to be considered is when users do something unexpected. As part of the design some kind of rescue path, would be needed to handle scenarios where the bot doesn't understand the user or doesn't have data to respond with. It is common for the bot to say → "I didn't quite get that" or "I am sorry, I don't understand", but again this is a scenario which doesn't help the user to move forward. Such scenarios would require a fallback utterance where the bot can either suggest an alternative path such as transferring to a human agent or sending an email to



the company ID, or route the user to the main goal of what it does such as "I didn't quite get that, can I suggest the following options that I can help you with" or, "Did you mean...", etc.

Another scenario to be handled in this context is user errors. Especially in a conversational interface, typos can be a really common error made by users. Providing users the option to re-confirm

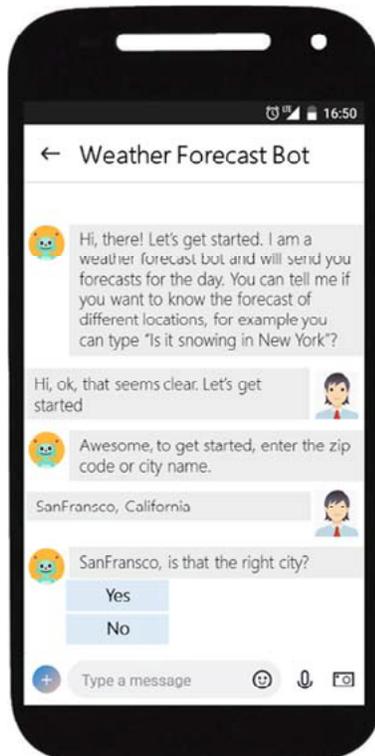
what they have typed or even an option to cancel or undo and go back, would enable a smoother user experience.

Providing users with an option to exit from the conversation to combat errors or misunderstandings will enhance the user experience. Having menu options added to the main conversation, can be very helpful.



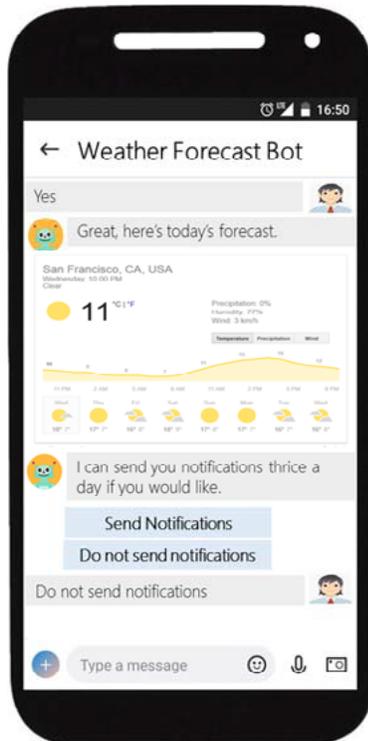
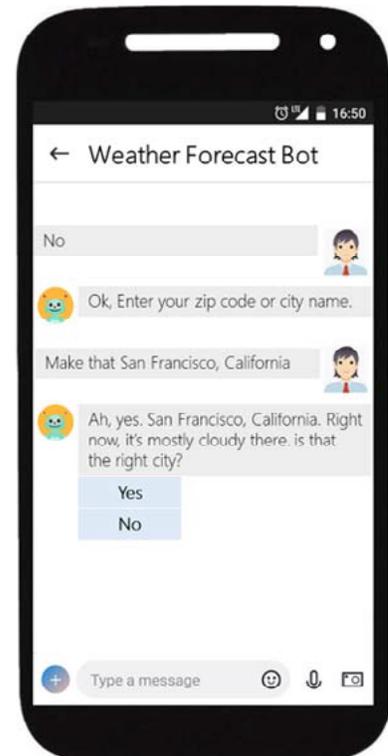
## Examples of Real life Chatbots and how they fair from a UX perspective

Let us take an example of a weather bot with basic functionality and how it interacts with a user.



The bot starts out strong with a clear Welcome Message, with clarity on what it does!

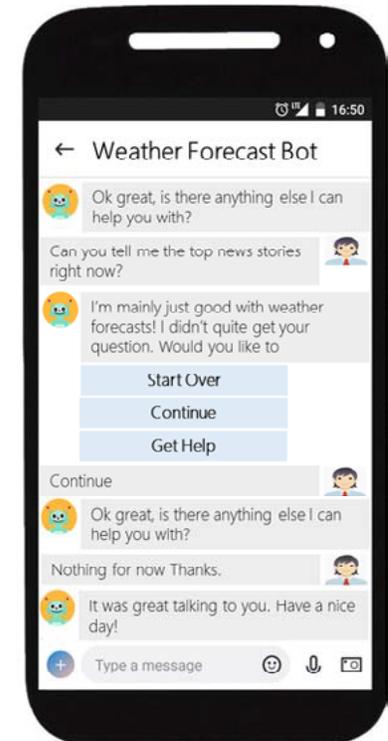
The bot personality is established with the choice of words and tone. It is not really a serious bot based on the conversation. The conversations is very simple and clear and the bot is re-confirming the user input and giving an option to make a change!



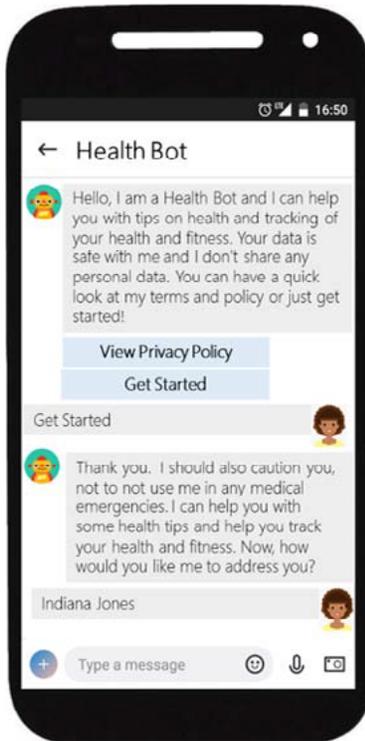
The bot clearly uses multiple rich controls making the user experience intuitive. It even uses visual modes of showing the forecast which is engaging!

The flow of the conversation is kept in mind, moving to the next step in the conversation.

The bot personality again comes into play when asked a question it cannot answer. Also it does not stop with a deadlock for the user, instead gives options to the user, guiding the flow and enabling options to get help or undo or restart, as needed!



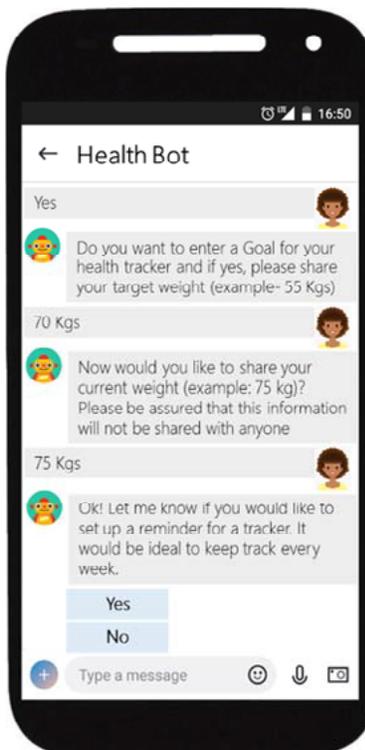
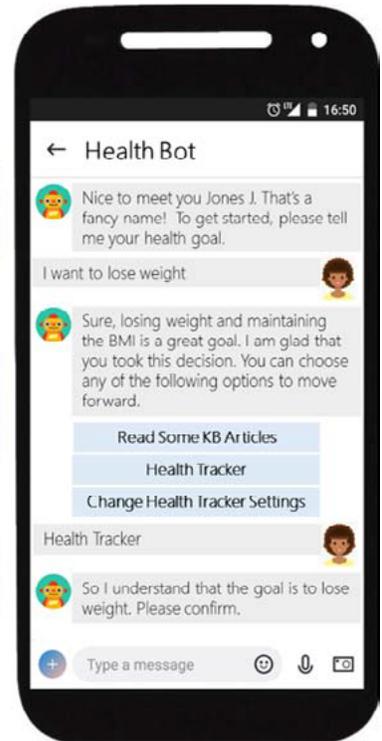
Let us take another example of a health bot, which is more formal in nature and how it interacts with a user.



The bot starts out with a clear Welcome Message and introduction with clarity on what it does! It also addresses a common user concern on privacy right at the start!

The bot personality is formal, yet not rude or curt. The conversations are kept simple and the user is guided towards Menu Options and Controls that reduce his need to type.

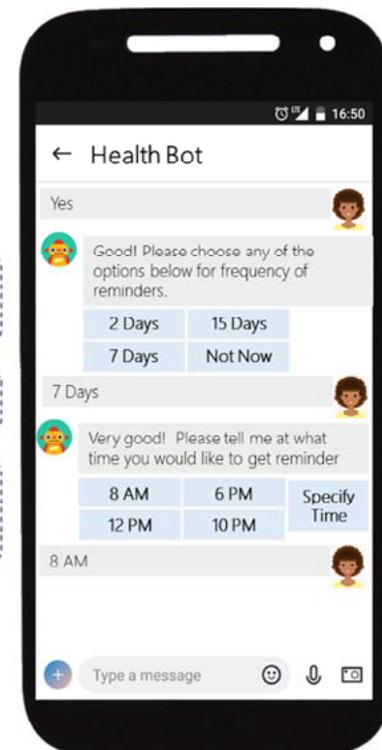
The bot is re-confirming, thus giving the user to change his choice

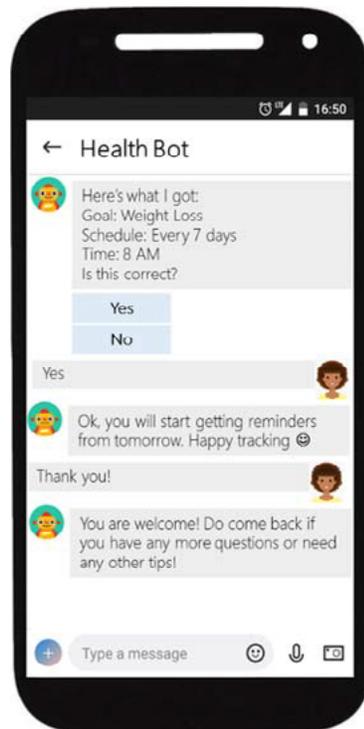


The bot guides with examples and provides re-assurance on privacy

The bot still gives an option to skip this.

The bot is not forcing the user to choose from the options it provides but gives an option to choose his/her own time.





The bot re-confirms a summary of all the selections, with the option to change at this time as well.

## Conclusion

To summarize, creating an absorbing, enjoyable bot experience is certainly a key differentiator between the bots that see adoption and those that don't. Bots need to enable a lasting experience that also holds up well in providing inline help, error prevention and recovery as well as enabling a UI that is pleasing and self-explanatory.

## About the Authors



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Rithika Messiahdas is a Principal Consultant with Infosys. She has over 10 years of experience in the Microsoft Dynamics space and works on CRM implementations, pre-sales as well as vertical solutions and new initiatives development. Her areas of interest span across thought leadership and building of new solutions enabling modernization to the existing CRM ecosystem as well as Next Generation technology areas across AI, Automation, Analytics and related enrichments in the CRM space.

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