The Secret Ingredient To Bringing Bots To Life

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Summary

Written By :

Anju Anand,

Narahari Krishna Chaitanya

Anurag Thakur

Summary

Helping you in the quest for a conversational AI that truly connects with people.

The non-deterministic nature of NLP-based bots and user's lack of familiarity with conversational interfaces have often been blamed for the failure of conversational apps to deliver business outcomes. Advancements of AI in the areas of speech recognition, classification, named entity recognition, etc., are facilitating conversational applications that are empathetic and understand us better. While consumers tend to interact with these applications as they would with any human, conversation design can go a long way in creating experiences that delight the users while delivering value to businesses that are investing in this emerging technology.

But how can we possibly design for an application that works with probabilities and takes free flow human conversation as input? How do we restrict users within the boundaries of what these applications can do without compromising on the experience? How do we ensure that businesses get business value out of investment while enhancing their brand perception? And last but not the least, is it possible to follow a set of best practices to come up with a good design for a conversational app every single time?

Banking on the experience of working in the conversational AI space, we conducted a primary research to gain consumer insights. With these learnings, we have attempted to answer these questions and other similar questions around how to design a conversational bot (text or voice) to be successful and introduce you to the art and science of conversation design.

Chapter 1

Introduction

Conversational applications, popularly (but not entirely correctly) also called as chatbots, have been in existence for over five decades now, however its large-scale adoption as tools that deliver value to businesses is quite a recent phenomenon. The adoption was primarily triggered by three factors:

- Relative maturing of AI allowing to move away from brittle rule-based bots. This includes advancements in the field of voice recognition

- Cloud computing allowing anyone across the globe to develop chatbots with little investment, leveraging algorithms being developed by large players

- Texting and internet proliferation – Behavioral changes in people with the high adoption of conversational channels, including messaging and access to the internet, creating a significant user base for chatbots

In 2011, IBM's Watson made quite a few headlines by defeating two of the 'Jeopardy!' champions - Ken Jennings and Brad Rutter. In 2016, Google acquired API.ai, which then evolved into Dialogflow, a platform for building chatbots. Microsoft also jumped into the fray with GA, its own bot development ecosystem, in late 2017.

The period from 2015 onwards also saw scores of startups launching their "No-Code" or "Low-Code" platforms, often focusing on a specific industry segment, while the number of bots that went live could smoothly run into hundreds of thousands, if not millions.

What happened then?

Going by Google trends (which in our opinion is a good representation of our online lives and interests), the popularity of chatbots rose exponentially till about the middle of 2017, after which the trend has acquired a more sober, yet growing trajectory.
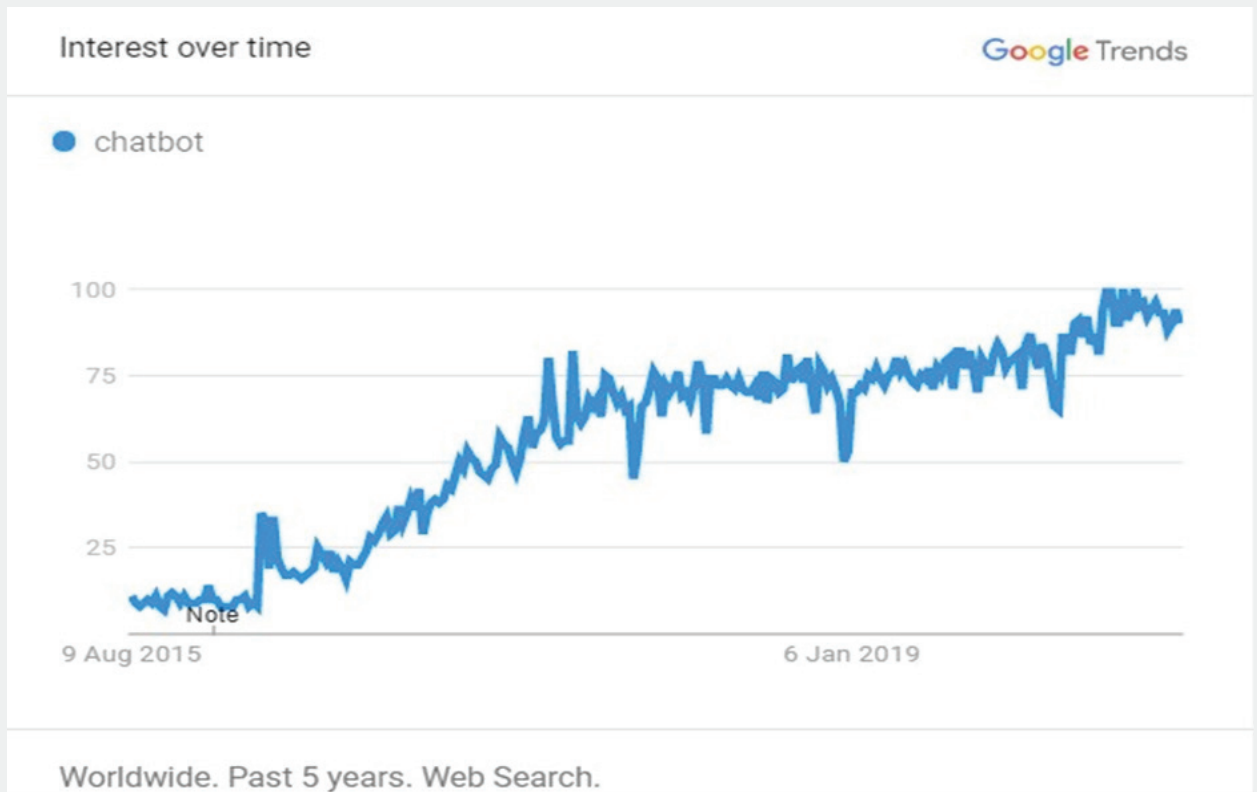
Depending on who you speak with, there are a variety of issues that resulted in the fizzling of the initial exponential trajectory of interest for both consumers and businesses. Some examples include the inability to understand what users were trying to achieve, the lack of useful use cases implemented end-to-end and not having any catalyst for change in consumer behavior, etc.
In our own experience, lack of focus on conversation design (along with multiple other important reasons as articulated in our blog earlier) is one of the key factors why conversational Apps have not been able to sustain the interest over time.

What is conversation design?

Conversation design is part art and part science. Put simply, it's about designing your conversational application to enable it to engage end users in a conversation that is useful for them.
Depending on the medium (text / voice) being used and nature of the conversation (asynchronous or synchronous), conversation design can greatly vary.

	Synchronous	Asynchronous
Text	• Webchat (prev.gen)	• Messaging • Webchat (new gen) • Emails
Voice	• Telephone calls	• Voice mails

Medium (vertical axis label) · **Nature** (horizontal axis label)

Other aspects like persona of end-user, channel being used, use cases/nature of the business and many subtler aspects also impact how conversations need to be designed for better impact.

In this whitepaper, we will go in detail about all these aspects of conversation design and understand the art and the science of conversation design.

Careful consideration of channels, mediums, user personas, use case requirements, nature of your business, devices being used, environment in which interactions will take place, demography of the users and language related needs are key to designing a bot. Conversation design helps you do all of these and much more.

Chapter 2

Conversational design - current industry trends

Currently, conversation bots are massively misunderstood, mainly due to the privacy concerns raised around digital technologies. However, COVID 19 has changed the equation. There has been a surge in the use of technology to play, work, shop, and stay connected. This increase in digital adoption has a major impact on consumer behavior. As per Gartner, the pandemic has accelerated deployments of conversational AI solutions. Healthcare, hospitality, and retail sectors have been the key adopters and the focus has been on customer service. Although many organizations added value to their consumers, the biggest benefit for this technology has been the use cases that are helping the market mature.

The key digital trends that we believe are driving Digital adoption are:

- Online has become the default purchase channel globally for many consumers. The search interest in online shopping and "how to buy online" scorch has grown 2x worldwide

- 70% of consumers globally stop the buying process if it seems too difficult for them

- In 2020, think with google reported that having best in class digital marketing can help brands with 20% extra revenue and 30% lower costs. As per google, other keywords with drastically increased search interest since the pandemic are:

  - Try on

  - Online classes

  - Live chat

  - Virtual gym

  - Virtual pub quiz

- 83% of the consumers who use their smartphone to search for products or shops, rate the website experience and the product itself to be equally important

- 58% of the customers use self-service up to 5x each week looking for fast solutions

- The underlying NLP technology can help with big data analysis by translating questions and problems into actionable insights

NLP for big data is being leveraged to find relevant information, insights and summarise the content.

As per a Forrester report, many of the chatbot solutions key functionalities are:

- Understand the value of the customer and their history of transactions with the company

- Provide personalized responses to each consumer even if its FAQ

- Automate actions based on customer responses

- Understand consumers context

- Lead consumers through an automated dialogue to clarity intent

- Provide real time insights to agents to resolve inquiries quickly

- Identity consumers and address them by name

Consumers need a personalised experience. This requires bots to contextualize a conversation and provide capabilities beyond simple FAQ's.

There are multiple conversational bots built to serve different purposes and meet business objectives as listed in the image below:

Voice Assistants	EQ bots	Customer Service
Google Assistant	Xioice	HelloFresh Freddy
Siri	Mitsuku	Act
Alexa	Replika	Tinka (T-mobile)
Cortona	Insommbot 3000	

Productivity bots	Creative bots	Knowledge bots
X'ai's Amy	Wordsmith	Do Not Pay (Legal)
Geekbot	Toutiao	Alya (Women health)
Trello bot	Molly - Thegrid.io	Health Alert (WHO)
Jira cloud bot		Dr. AI

Market Research bots	Planning bots	
Polly (Slack)	Emirates	Melody (Medical)
CISR (Delvinia)	WayBlazer	Woebot (Therapy)
Inca	KLM	Instalocate (Finance)
Remesh		Effy
		Vera (HR)
		Unicorn Bay (Stocks)

Chapter 3

Challenges in Conversation Designing

We all know the "wow" factor that bots bring to any function, but is a bot going to replace a human interaction completely? That's something that we would eventually want to achieve, but here's the thing, mimicking a human conversation is not yet possible and thus bots are not going to be able to respond to all questions just like a human. Bots are human made at this juncture and might not be able to answer everything that a user might ask.

Let's have a sneak peek into the "training" aspects of a bot and how conversation design ensures a bot is capable of interpreting and responding to consumer queries. An enterprise bot for example is supposed to be an expert at answering HR policy related questions and help employees apply leave, download payslips, look at the next holiday as per calendar, etc. Such an enterprise bot is not "trained" to answer questions about how to remove wine stains from the carpet or how to bake a delicious lip-smacking pie and thus when users ask the enterprise bot about things that it has not been trained on, it would not be able to answer that question. Given this situation, "conversation design" plays a key role to make sure that the user interaction with a bot is pleasant and should there be questions that are asked outside of the bot's trained knowledge to answer, the bot's response does not trigger frustration for the user.

The most technically sound bot would still not work should it not provide its users a wonderful interactive experience. This experience is driven by the "Conversation design" and effective and accurate training of content into the bot. There are several bots that have been launched with state-of-the-art technology by huge multinationals, which have been heavily disliked by users since the bot did not answer the questions right, offended users, was boring, or just did not understand the user leading to frustration.

The best way to look at the learning curve of a bot is comparing its learning with the way humans do from the time of birth. As soon as a baby is born, it does not know how to speak and neither does it know how to understand what others around the baby are talking. At the age of 2 the baby now starts understanding the meaning of a few words and also starts pronouncing a few words. At the age of 5 the baby can now talk a full sentence coherently and post that as years pass by the child grows up and learns so many things in school and college. As an adult it can now understand conversations and also provide opinions and contribute to the discussion. The same is the kind of learning journey of a bot. It initially can answer to only pointed or targeted questions but as we train the bot with more content and design conversation flows, the bot will start responding to a lot more queries. Here are some challenges that we see while we put together a conversation design for a bot or training the bot with content:

- Conversation with the bot offends the user
  A classic example where the bot response offended the users is the "Zo" bot by Microsoft. The bot being a social bot was liked by its users and also holds Microsoft's longest continual chatbot conversation. But, in 2019 Zo made offensive comments stating that the "Quran is violent". While we know designing a conversation and training the right content is important, it is super critical to make sure that the right content is trained – politically correct and non-offensive.

- Bots that don't understand user sentences
  We know that all bots have a learning curve, but it could be extremely annoying for the user if the bot does not understand a few common words/sentences. Here's where understanding the user group that the bot is intended to help will be a good idea. There could be different ways users can ask the same question and thinking through the variations will help reduce the bot not understanding user intent.
  A good news bot like CNN created frustration when it understood only the word "Unsubscribe" with no other words in the sentence should users want to unsubscribe to news content.

- Bot's scope isn't well defined
  This is definitely another important issue that many business teams face. The bot's scope should be very clearly defined specially in a B2B or a B2C space and the same must be communicated to its end users to avoid unpleasant user experience. Facebook messenger's "M" bot was scoped to listen in on conversations that users had on messenger and provide insightful suggestions. Eg: If two people on messenger talked and one of them said to the other, "Lets catch up over call instead", the "M" bot listened to the conversation and would immediately provide "call on video" or "call on audio" option to the user. The scope here for the bot is extremely wide and the bot will most definitely not be able to provide insights and help through all conversations.

- Domain and function related bots don't need to be very chatty
  If a bot is built to address a specific task, then users would need the shortest way to get the task completed. The correct amount of being chatty is critical. While adding some humor and chattiness to the bot makes for a fun User experience, function is what should be prime focus. The Hipmuk travel bot is an example here. The bot was intended as a travel bot to help provide the cheapest and best travel options to users in one conversation. Its chattiness however resulted in slowing the process to get the options for travel and then book the option.
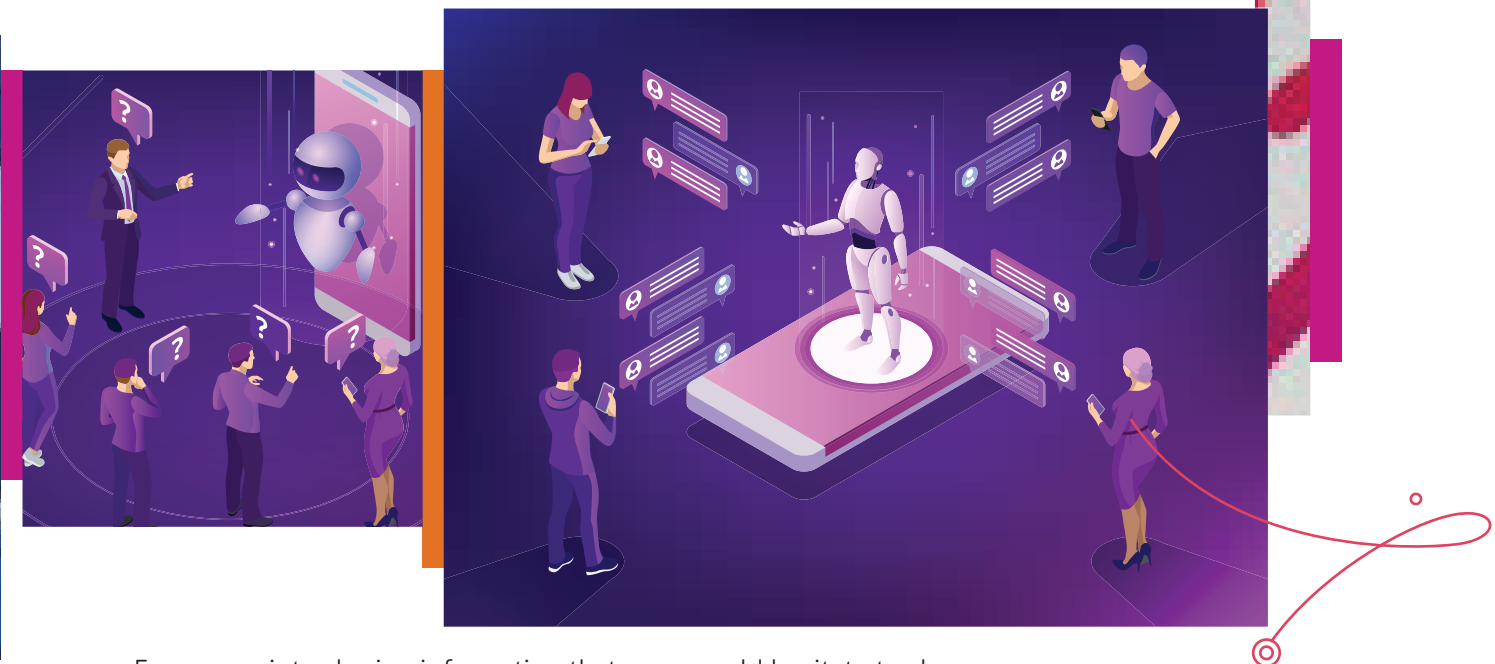
- Ease users into sharing information that users could hesitate to share
  Designing bot conversations to help garner a conversation in topics that are considered taboo is always tricky. Let's say we need a bot that councils a person who is in depression or a bot that talks to a young girl who has just started menstruating about her natural bodily change or a medical bot that listens to your symptoms to predict what could be the infection that you have, these are tricky discussions and making the users comfortable to talk and reveal things will be the key issue along with of course the legal aspect of making sure that the right answer is shared by the bot. IBM's "Watson for Oncology" was a bot that provided treatment recommendations to cancer patients. There were two issues that ended up shutting the bot, patients comfort in revealing the correct symptoms and incorrect treatment recommendations which medical professionals did not align on.

- Bots that speak in more than one language
  Multi-lingual bots come with challenges in language nuances. Literal translation from English to native language will never be effective as tonality and the context of translation needs to be kept same during the translation process. A sentence in English having one meaning, can end up being interpreted in many different ways in a native language, if literally translated. Auto-translate is not the best option in these scenarios.

A well thought conversation design can help bot developers and businesses avoid some of the most common mistakes that bots make.

We can overcome the challenges by ensuring that a well thought conversation design is put in place. While defiantly not taking away from the technology capabilities that needs to be top notch, if the same is not supported by a conversational design and constant training of bots to help it learn more things, then the bot is sure to not be sustainable in the long run.
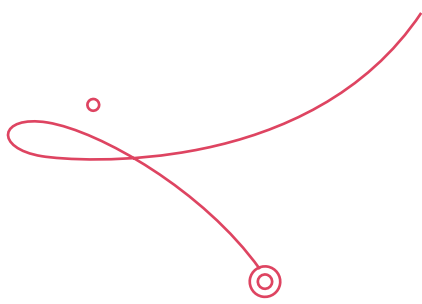
Chapter 4

Conversation Analytics

How would you know if an 'edit' is needed in the existing conversation design? The quintessential question is how would you determine if a bot is performing well and more importantly, how would you determine if a conversation flow edit can help the bot performance manifold? Let's have a look at some of the indices that would help determine the bot's performance. We bucket the indices into 4 buckets

Conversational Analytics
Indices that matter

Bot Performance indices
- Average # of message per conversation
- Bot bounce Rate
- Bot click through rate
- Bot performance score

User Adoption and Satisfaction
- Top 10 users
- # of unique users
- Average conversation time

Conversation Analysis
- Top topics of discussion
- User feedback analysis
- Conversation log analysis

Bot Metrics Analysis
- Bot Response type
- Intent VS Resolution
- Intent VS Confidence score

1. Bot Performance

Essentially, a quick snapshot of how many users engage with the bot, do users prefer using the bot mostly? The performance indices also help determine, where in the conversation did the user drop off and what could possibly be the reason. Bot performance indices can help get a view on what part of the conversation design was liked or disliked by the user:

- Average # of messages per conversation – Will tell us if the conversation was engaging enough for the user or did they drop off just after the first interaction
- Bot bounce rate – # of unique users who leave the Chatbot after asking only 0 or 1 questions / total # of unique users Deeper analysis on this index will reveal if the answers from the bot needs to be enhanced or if more utterances need to be added to help get the right answers to user questions
- Bot click through rate – Does the bot entice its users and pulls them to click on the bot and use it? This index will help understand if the bot UX is attractive and makes the user curious to explore it.
- Bot performance score – The comparison between total questions asked by the user with the number of questions answered out of them pull out the performance score. This index is a great eye opener to further analyze the unanswered questions and get a deep insight on what probably is the reason for the bot not being able to answer those.

Conversational Analytics give you the "eyes" that let's you really observe what is happening and take right data driven decisions at the right time.

2. User Adoption and Satisfaction

This bucket focuses to understand what the users are looking to use the bot for. Do they have a few standard processes that they execute by talking to the bot? Are there some conversation patterns that we can derive out of the conversation behavior of the top users?

- Top 10 users – Most frequent users of the bot. This would be a great index to know about the conversation parts that users used the most, by studying the patterns of top users. This would help underdatnd the best parts of the conversation design that users use often.

- # of unique users - Does the bot attract unique users on a regular basis? This would be an index that would not be relevant for an enterprise bot where aim would be to attract the same set of users (employees of the company) regularly. But is surely a good indicator in a B2C kind of structure.

- Average conversation time – The average time spent by a user using the Chatbot. A great metric to check if the bot conversation is adequately engaging!

3. Conversation Anaylsis

These set of matrices are the best judge of the content that we have trained the bot on. This would be the place where we analyze the conversations that the users loved and those that they felt were irrelevant or was out of context.

- Top topics of discussion – What were the most common questions that the users asked the bot? Did they get answers to those? If there were topics that users were interested in which were not yet designed on the bot, then that's an opportunity to add new conversation flows or Q&A content.

- User feedback analysis – If the bot had an area or a prompt to capture user feedback, then that's a great area to look for the best and the worst experiences that users had about using the bot. A keen listening to user rants will surely point us to things that we can do better to enhance the conversation experience with the bot.

- Conversation log analysis – On bots, especially the ones that don't hold confidential user information, it's always a good idea to eavesdrop a little! Get a listen on all things that were asked by users and see what parts out of the things asked need to be trained as conversations into the bot.
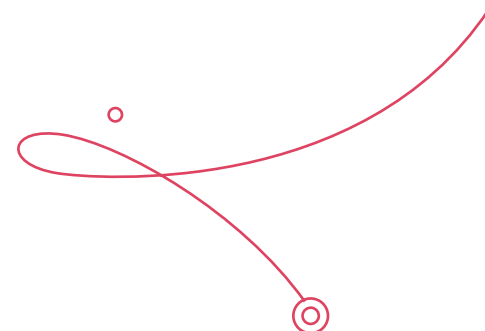
4. Bot Metrics Analysis

There could also be technical parameters that are great indicators of things that can be improved in the bot. Listing some of them here:

- Bot response type – what was the most attractive response type for the user? Did they like a text response? Or did they do a round through with a follow up prompt? Or did they like a conversation form flow? Again, this matrix will provide UX elements proffered by the user and will also be a great insight to keep in mind the preferred UX element so that the conversations could be designed to suit the experience envisioned by the user.

- Intent Vs Resolution – For all conversations that had an intent (what the user set out to achieve by going through the bot's conversation flow), how many were taken up until the last question of the conversation flow? Did users drop off in the middle? If yes, then that's a great insight to dig deeper on why was there no resolution and if the conversation flow needs to be made shorter or more efficient.

- Intent Vs Confidence Score– Confidence score, simply put, is how confident is the bot to respond to a particular user query. Was there a situation of ambiguity and the bot presented the user multiple choices so that it could pinpoint the exact intent? Should the confidence score below benchmark for most conversations, then that's something that needs to be given a second look at. Low score would mean that the bot was unable to interpret the user query.

While building the bot, focus needs to be given on conversation design and content. More importantly, after building the bot it is key to keep a watch out on the above indices to make sure if the bot is being updated and kept current! A conversation designer would be the key to helping fix the issues in some conversation flow related Indices.

Chapter 5

Survey Findings – Primary Research

Over the last decade AI has become the buzz word and consumer empathy has been the buzzword in marketing for a while now. There have been major strides in the way AI recognizes and reacts to human empathy. However, this tech needs to be complemented with effective use cases that consumers care about, a scriptwriter, strong content, and continuous improvement based on analytics from consumer engagement. To get deeper insights on how conversations need to be designed for a bot and consumer perceptions towards bots, we conducted a primary market research with a target market of technology enthusiasts – people working in the technology of brand marketing space.

With 590 responses, the survey offered us a deep understanding into the consumer thought process. Below is an empathy map articulating a shared understanding of user needs with respect to conversational AI:

1. Who are we empathizing with

- Educated consumers in the age group of 18 to 60
- Technology enthusiasts
- Use or have interacted with chatbots and voice assistants.
- Represent a population with high probability to be the early adopters of AI and conversational technology

2. What they need to do

Interacting with bots to:

- Help with keeping notes and organize meetings and set reminders
- Solve problems without having to wait for customer support
- Complete tasks quickly (pay bills, book tickets etc...)

6. What do they hear

- Rarely ever find a bot that is useful
- Its like talking to a child
- Conversations are too long, why can I not talk to a person
- Bot just collect all my information, privacy is lost
- Voice assistants are a must for Smart homes
- Some bots got racist in a day. AI is out of control

7. What do they think & feel

Pains

- Privacy of my conversation
- repeat or alter my language
- Cant keep context
- no motivation to interact
- Not personalized
- Conversations lack empathy

Gains

- Save time
- Accomplish tasks with minimal inputs
- Understand me as a person and contextualize conversations
- Personalized experience
- A companion

### Other thoughts & feelings to motivate their behavior

- An engaging and empathetic conversation
- Bot need to take the center stage with an objective to save time for the consumer - not just as an alternative channel

2. What do they see

Bots which are useful at times answering their queries, solving their problems and assisting them at every step. But at times annoyed by the lack of empathy and lack of understanding, prolonging certain conversations.

5. What do they do

- Look for representatives and website content as an alternative
- Converse with chatbots, but avoid when possible
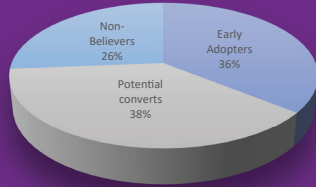- Leverage voice assistants for music and other informational queries
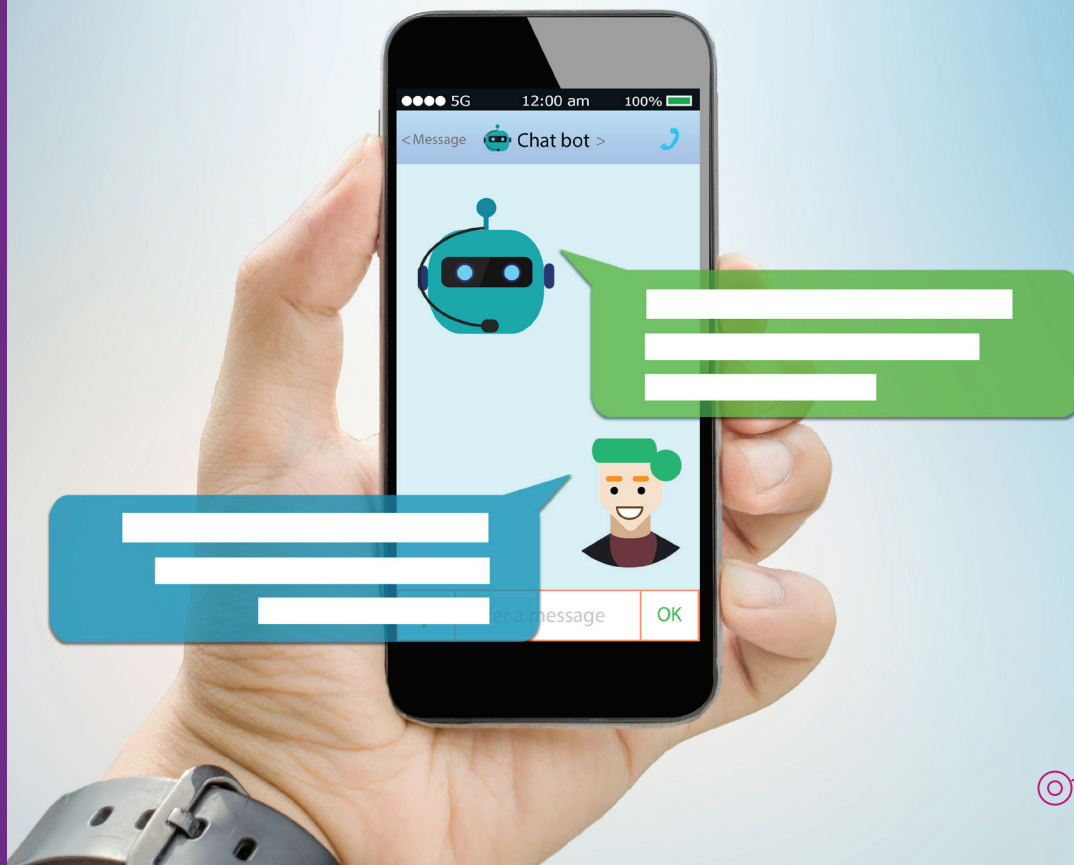
590
Total Survey participants

-19 NPS
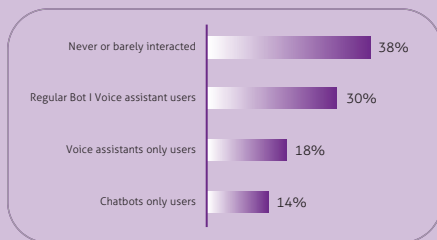### Likelihood to recommend conversational bots

Voice & bot technology adoption

Non-Believers 26%
Early Adopters 36%
Potential converts 38%

Voice assistants soon to be mainstream

36% of the participants already own voice assistants at home. There is a significant majority (38%) planning to buy one. There is however a significant population (26%) who would prefer staying away predominantly due to privacy concerns or don't see the need as it doesn't solve any of their problems of today.

Voice assistants have high traction, but Chatbots still lack adoption

Never or barely interacted	38%
Regular Bot I Voice assistant users	30%
Voice assistants only users	18%
Chatbots only users	14%

Nearly 44% of the consumers have interacted with chatbots but considering the audience of this survey are receptive to technological advancements, it is significantly low.

Lack of privacy, robotic interactions and intrusive were found to be the key reasons respondents don't prefer using conversational bots

Of the 366 respondents who have used conversational ai, 34% of the them were unhappy with their bot interactions.

Of the 95 respondents who have never interacted with a bot, 59% have never felt the need for a conversational bot and 19% don't know how to find one

Conversational AI - What are consumers looking for

An expert companion answering my queries

Solve problems without having to wait for customer support

Action some tasks quickly (pay bills, book tickets etc)

Help finding the right product and make the purchase

Help with keeping notes and organize meetings and set reminders

100%   0%   100%

Conversational AI – What do consumers expect from conversational bots

100%   0%   100%
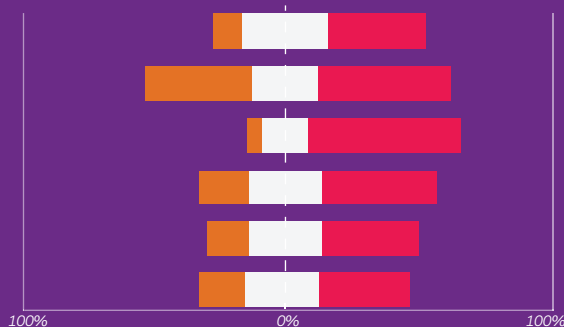
An engaging conversation

To the point and precise conversation

Makes my work quicker with lesser steps

Entertaining and with a sense of humour

Feels like a conversation with human

Communicates with pictures and videos

We also asked our survey participants, "If you are to build an ideal chatbot, what would it do? The intent was to understand what is the unique feature that consumers find the most crucial in their bot. Below are some of the interesting responses we received:

"Provide correct recommendations and provide 100% privacy" - Catastrophe Risk Analyst

"Chatbot/Voicebot provides generic answers which I already know, and its waste of time." - Technical Architect

"Provide correct recommendations and provide 100% privacy" - Catastrophe Risk Analyst

"'Introduce human character like mascot to interact with user" – UX Architect

"In case of indirect questions or when the bot can't understand, it should find answer which are closely relevant to that question, instead of saying "can't understand" – Technical Lead

""'Parse through a long explanation instead of a checklist type approach. Imagine if you're talking to customer service on an issue. You start with a long explanation of the symptoms then the human would ask clarifying questions based on it to fill in the gaps." – FMCG brand- IT Manager

"'Customer service instead of waiting hours that someone answer the phone " – FMCG, Brand Manager

"'(a) Clearly call out its privacy policy at start (b) Able to precisely answer questions like humans would" – General Manager, IT

"'Emotionally intelligent" –Sr. Risk Analyst

"Answer questions quickly and correctly, feel interactive like I am working with a human, be easy to find/use" – FMCG, Brand Marketing Technologist

"one that integrates with several other devices and applications " –Electrical construction firm, CIO

"Bots are ok, but when you are getting nowhere it has to give you the option to speak to a human." –FMCG, Associate Director

"Help me with Finances and pay my bills " –Swiss Student

Chapter 6

Best Practices

Now that we have had a look at the current trends, challenges in conversation designing and the KPIs that we would need to track, its clear that we need to pay attention to the conversation design. While we know that the initial conversation design is great to get the bot kick started and go live, we should also keep in mind that regular tracking of the bot performance is also key to keeping the bot current. Taking this discussion forward, a big struggle for a lot of bot projects, is to document all of the conversation flows in the right manner so that we do not miss out on any data that would be critical for user engagement with bots.

The one thing that we swear by is to have a charter for a bot project. We call this the bot project "brief". This is the key document where we would list down some key aspects that will drive the conversation design for a bot. Some of the key focus areas of this document would be to give an idea to the conversation designer:

- Introduction to the bot and the functional areas that it is going to be designed for

- Give a novice conversation designer a peek into what a chatbot is and how conversations need to be designed for a bot

- Provide content guidelines:
  - Tone of voice
  - Usage of words
  - Focus on language nuances (specially for a multi-lingual bot)
  - Provide examples of conversation flows envisioned in the bot

Once the "brief/charter" is ready, we would move to hashing out the actual nuances. The charter sets the right pace to go into detailed documentation of bot requirements. Now here's the trick, good documentation of the expected bot conversations will make sure we have fewer open ends.

This will help in two ways. One, you would be able to look into all possible conversations that a user would have with the bot that needs to be built, and two, you will be able to provide the correct conversation design to the technical team so that they development could be made as per the conversation design envisioned.

We would recommend Documentation to be done in below steps:

- Make a mind map
- Build out a functional map
- Create a Navigational flow
- Create a conversation flow
- Create Intent, utterance, Entity map

5 step process to bring out the most effective chat flow

Mind map

This is the 30,000 ft level mapping of all the broad functional areas that the bot should cover

Functional map

A functional map breaks down the mind map into finer details. The functional map breaks down the mind map into functional areas, the sub functions and bot actions

Navigational flow

Each sub area mapped in the functional map needs to be broken out into a flow diagram by building the navigational flow.

Conversational flow

The navigational flow needs to be complimented with the conversation design for a particular intent

Intent, Utterance, Entity map

This is the area where we map the intent with its respective utterances and entities

Let's get a glimpse into the above-mentioned steps:

A conversation designer will be a person who will come with the knowledge of the steps to effectively document a conversation design.

As best practices there are 'Do and Don't' to keep in mind while embarking on to a conversational AI journey:

Must Do:

- Bots need to be built with specific objectives and KPI's and ensure they answer the question "why consumers will use this bot"

- A scriptwriter / conversation designer is a must, it can't be replaced by a copywriter

- Bots need continuous improvement driven by analytical insights giving you a view into consumer behavior

- A defined consumer journey guiding consumers through the flow is important especially for a young bot

Must Not Do:

- Bots shouldn't be treated as alternative navigation tools… but specialized conversational applications to engage consumers

- Don't try to build a know-it-all bot. That could be the eventual goal. Focus on key consumer needs that the bot would fulfill

- Answering consumers questions doesn't necessarily mean a pleasant consumer journey. Spend time in defining the conversational journey.

Chapter 7

Conclusion

This paper shows the importance that conversation design needs to be given while building a bot. Most of us focus on getting the technology right along with all the functionalities but equal or more importance needs to be provided to the "Conversation design". The make or break of a wonderful interaction with the bot happens through effective conversations.

Getting the bot to engage in productive conversation is the goal but focus should also be on "continuous improvements". This would make the user experience better specifically driving more number of repeat users. As mentioned earlier, a bot needs to do as much learning as it can to become a master in its focus area.

A "Conversation designer" is the key to offer the best conversational experiences with the bot. Getting a conversational designer to make the conversation flows in a bot is what will bring bots to life. While user experience is the key to help keep users engaged to use the bot, this user experience will be brought to life by the conversation designer.

Following the best practices for documenting bot requirements and making sure the "don'ts" are avoided will help build an effective bot.

are, we have decoded the secret to bringing bots to life – Effective Conversation design!

Chapter 8

References

- Best, J. (2013, September 9). IBM Watson: The inside story of how the Jeopardy-winning supercomputer was born, and what it wants to do next. TechRepublic. https://www.techrepublic.com/article/ibm-watson-the-inside-story-of-how-the-jeopardy-winning-supercomputer-was-born-and-what-it-wants-to-do-next/

- Blier, N. (2020, June 5). Stories of AI Failure and How to Avoid Similar AI Fails. Lexalytics. https://www.lexalytics.com/lexablog/stories-ai-failure-avoid-ai-fails-2020

- Davenport, C. (2017, October 19). API.AI, Google's tool for making Assistant apps, is now Dialogflow. Android Police. https://www.androidpolice.com/2017/10/11/api-ai-googles-tool-making-assistant-apps-now-dialogflow/

- Dilmegani, C. (2020, December 10). 8 Epic Chatbot / Conversational Bot Failures [2021 update]. AIMultiple. https://research.aimultiple.com/chatbot-fail/

- Google trends. (n.d.). Google. https://trends.google.com/trends/explore?date=today%205-y&q=chatbot

- Johnson, K. (2017, April 19). Facebook Messenger hits 100,000 bots. VentureBeat. https://venture-beat.com/2017/04/18/facebook-messenger-hits-100000-bots/

- Kharpal, A. (2016, September 20). Google bought a chatbot start-up for a future where we'll all be talking to robots. CNBC. https://www.cnbc.com/2016/09/20/google-bought-a-chat-bot-start-up-for-a-future-where-well-all-be-talking-to-robots.html

- Looper, C. (2017, September 23). Everything you need to know about Facebook Messenger's M assistant. Digital Trends. https://www.digitaltrends.com/mobile/facebook-m-features/

- Measuring Digital Development - Internet use. (n.d.). ITU. https://itu.foleon.com/itu/measuring-digi-tal-development/internet-use/

- Mindtree Blog. (n.d.). Mindtree. https://www.mindtree.com/blog/chatbots-why-they-will-suc-ceed-when-they-have-already-failed

- Oettinger, A. G. (n.d.). Computational Linguistics. https://web.stanford.edu/class/lin-guist238/p36-weizenabaum.pdf/

- Sun, L. (2017, February 28). Facebook Inc's Chatbots Hit a 70% Failure Rate. The Motley Fool. https://www.fool.com/investing/2017/02/28/facebook-incs-chatbots-hit-a-70-failure-rate.aspx

- Watson Jeopardy! Challenge. (n.d.). IBM Watson. https://researcher.watson.ibm.com/re-searcher/view_page.php?id=6859

- Wikipedia contributors. (2021, March 15). Zo (bot). Wikipedia. https://en.wikipedia.org/wiki/Zo_(bot)

- Equity, B. C. F. (2021, March 3). Chatbot Trends Report 2021 - Chatbots Journal. Medium. https://chatbotsjournal.com/chatbot-trends-report-2021-b15479c404e4

- Casey, S. (2020, December 12). It's Time Chatbots And Virtual Assistants Play A Bigger Role In The B2B Buyer Journey. Forrester. https://go.forrester.com/blogs/its-time-chatbots-and-virtu-al-assistants-play-a-bigger-role-in-the-b2b-buyer-journey/

- Leggett, K. (2020, August 31). The Three Megatrends For Customer Service In 2020. Forrester. https://go.forrester.com/blogs/the-three-megatrends-for-customer-service-in-2020/

- Goasduff, L. (2020, December 3). Artificial intelligence trends. Copyright (C) 2021 Gartner, Inc. All Rights Reserved. https://www.gartner.com/smarterwithgart-ner/top-trends-on-the-gartner-hype-cycle-for-artificial-intelligence-2019/

Anju Anand

Anju is a digital business consultant with 6+ years of experience working with emerging technologies such as conversational AI and social media listening/analytics. She has consulted on and implemented many successful Chatbot and Speechbot projects, with "Conversation design" being her core strength. Having worked with multiple businesses to transform their digital journeys, simplifying complex business flows and business value creation are her key areas of interest.

Narahari Krishna Chaitanya

Krishna is an accomplished digital manager with 10+ years of experience in digital marketing and digital strategy at Mindtree. He is adept at boosting consumer engagement and e-commerce sales through innovative marketing strategies. Krishna specializes in managing the design, development, and operations of an integrated digital ecosystem (mobile apps, websites, content, and search) across Europe and APAC markets. He is a passionate brand builder and a dynamic team player known for finding solutions through critical thinking and creative strategy.

Anurag Thakur

Anurag Thakur is a principal consultant specializing in applying emerging technologies as tools to achieve the intended business outcomes. Over the last 15 years, Anurag has worked as a technology & strategy consultant in multiple large & small business transformation programs that have leveraged business and technology innovations of those respective time periods.

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 260 enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in 24 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 27,000 entrepreneurial, collaborative and dedicated "Mindtree Minds."

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