



Chatbot and AI Design Principles

UX eye for a tech guy



Hola

Soy humano

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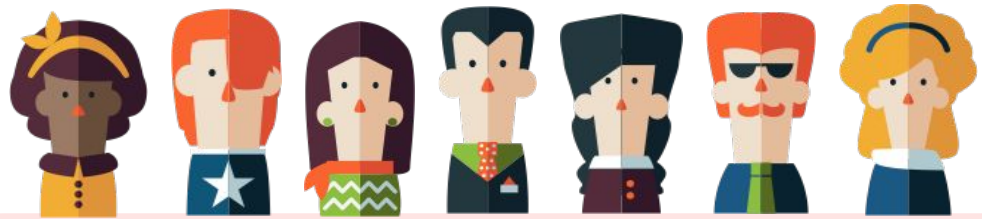
1

Understanding your users



Customer personas

What do we need to know about our customers to ensure the chatbot will be successful?



Demographics

- Age
- Devices
- Location
- Gender
- Language
- Occupation

Needs

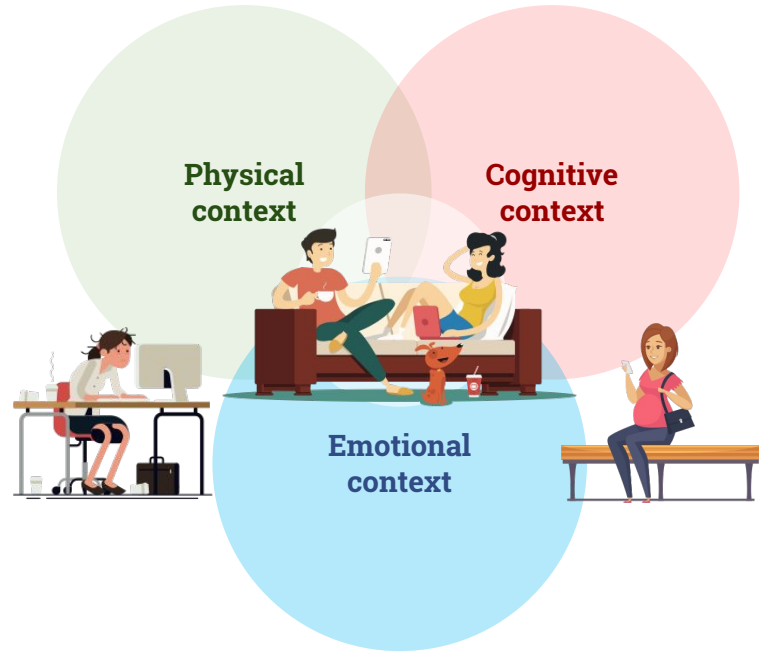
What are their needs and emotions when it comes to interfacing with your product / services? Why?

Behaviours

What daily behaviours do they have? What behaviours do they exhibit with your product / service and why?

Customer contexts

What do we know about your customers contexts?



2

Identifying the problem

A horizontal bar with a dark blue segment on the left and a light blue segment on the right, positioned above the text.

Problem statement

How might we solve the problem of...

3

Defining the scope of your bot

A horizontal bar with a blue gradient, transitioning from dark blue on the left to light blue on the right.

Chatbot objective

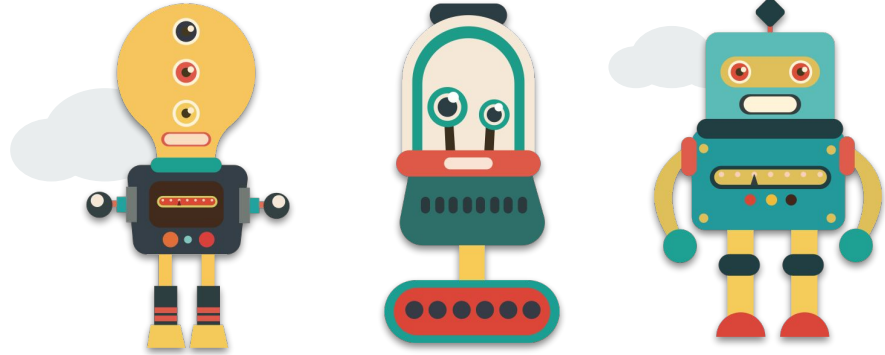
The chatbot will try to solve the
problem of...

when people are...

so that...

Chatbot persona

What kind of personality does your chatbot need to have in order to engage and service your customers in their contexts?



Goals

Protip:
Its okay for
your bot to
only have 1
goal at
launch!

Personality

Understated Enthusiastic

Playful Dry

Formal Informal

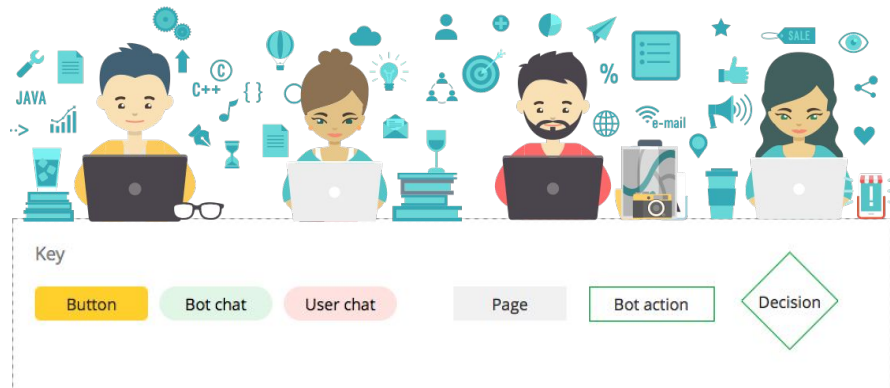
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Designing conversations

Mapping a conversation flow

So usually with manual automation, we start with a key as we start to map the architecture.

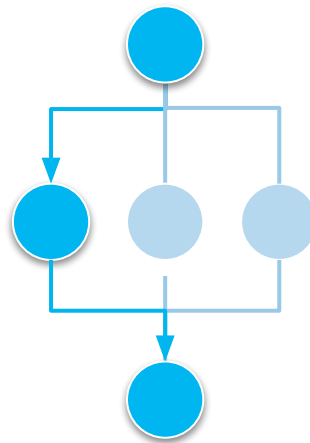
Choose a tool that facilitates real-time collaboration



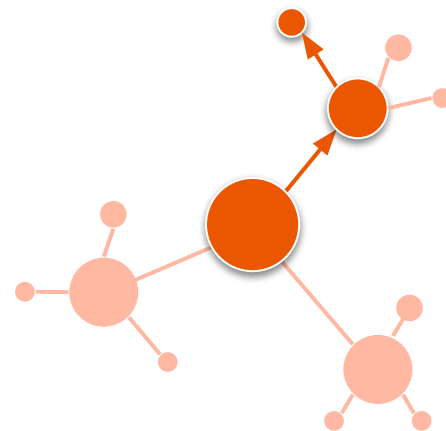
Conversation types

There are two main types of conversations. The first is task-led, where the aim is to accomplish certain goals while going through the conversational funnel. The second will be a topic-led conversation; this type is different because it's more about entertainment.

Choose your technology wisely as some will restrict your flexibility when things go wrong.



Task-led
Funnels you to an end

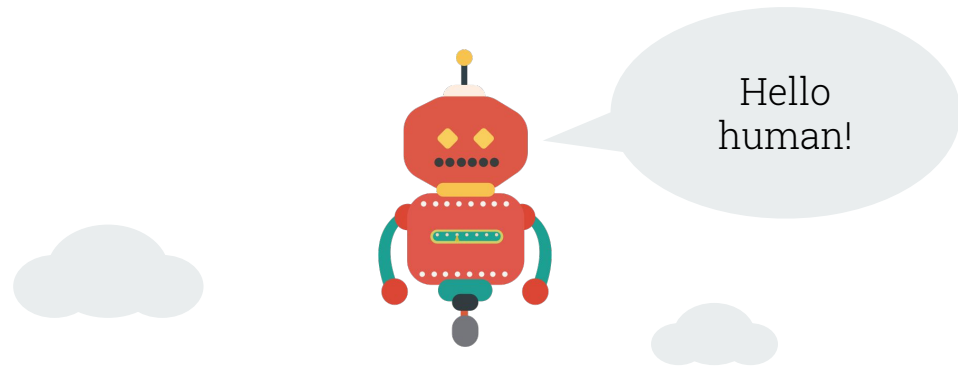


Topic-led
Endless exploration

The chatbot greeting

What do we need to consider in our chatbot greeting given the wide variety of contexts and the way people tend to converse in text?

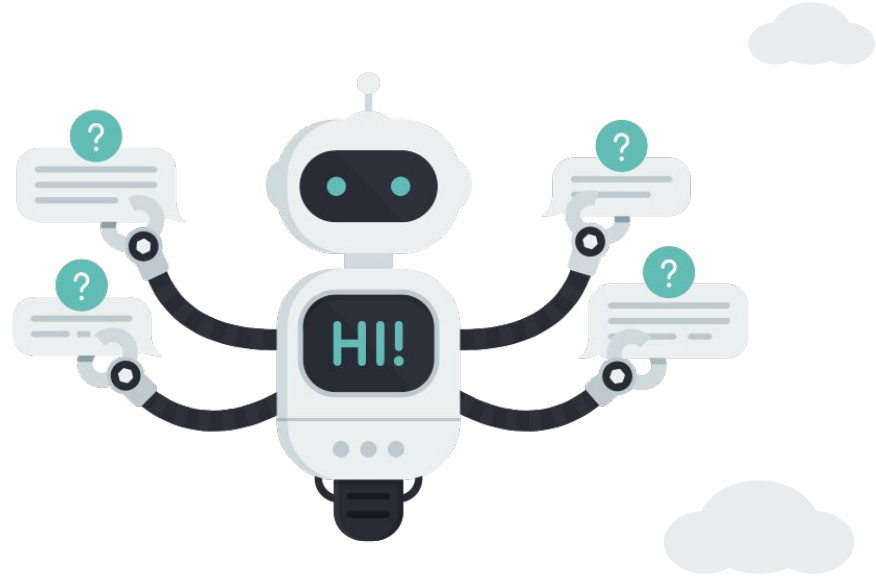
- I'm not human (avatar helps)
- What I can do...
- Establish trust



Known inputs

Illustrate all possible entry points and any “known” categories the bot will recognise in dialogue.

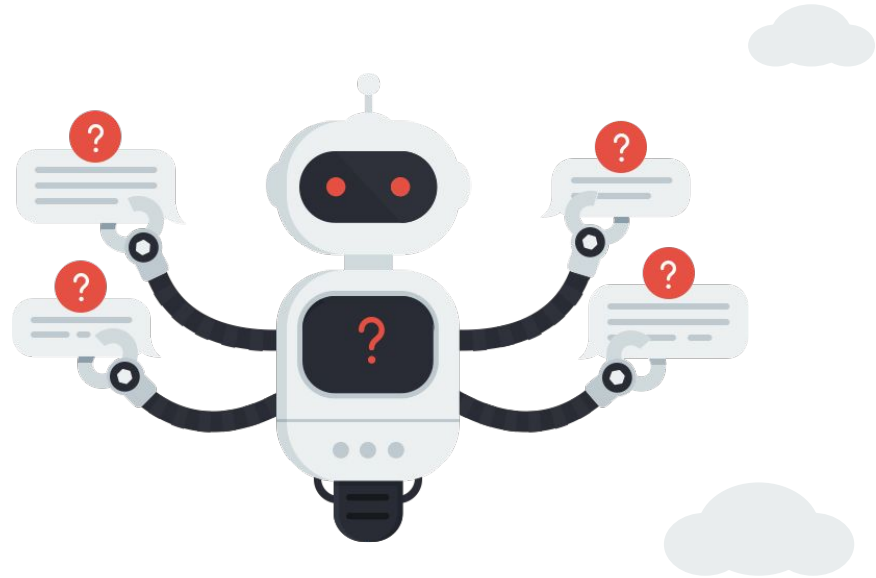
Depending on the tech you choose, this will be one of the most time consuming things to get the desired experience at the beginning.



Unknown inputs

Prepare a good “I don’t know” fallback

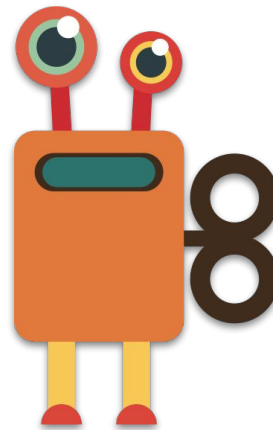
- Vary responses with hints
- Confirm user input in dialogue
- Try humor and personality
- Allow for a safety net referral



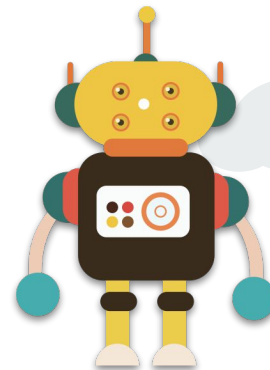
Responding to unknown inputs

- Be responsive
- Be remorseful
- Allow user to try again
- Vary responses with hints
- Capture errors to learn
- Allow for escalation words

Hmm, I am sorry but I am still learning and I'm not familiar with those words, Could you try again using different words?



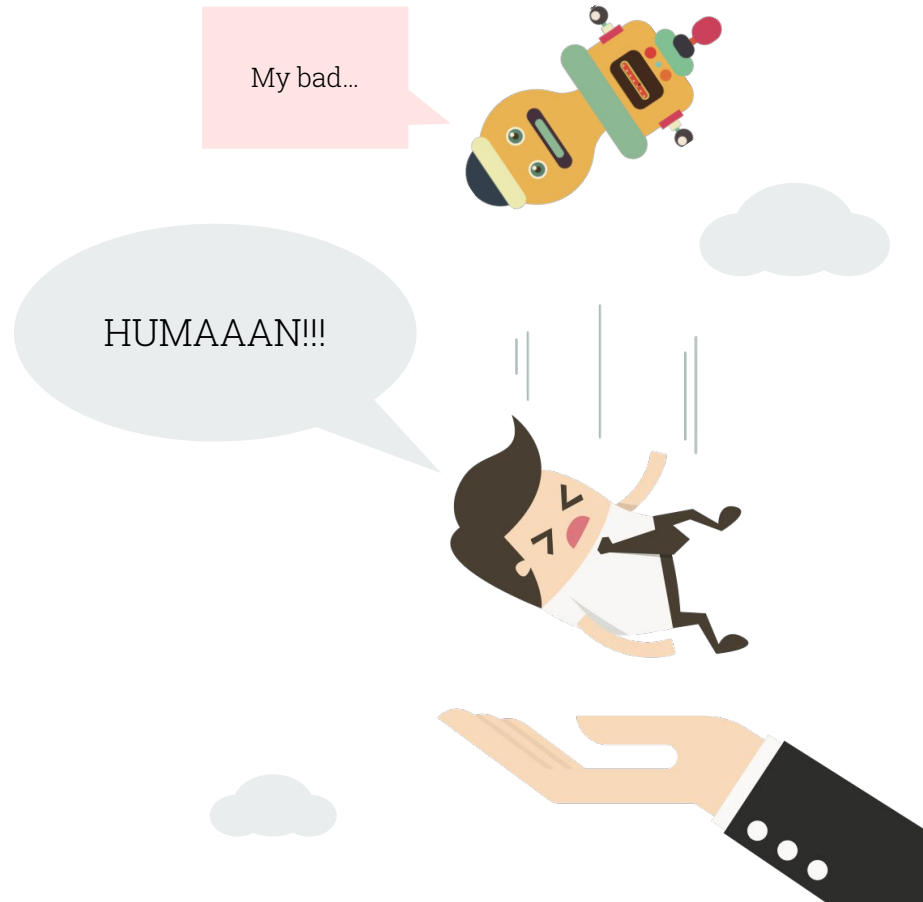
I am sorry but I still cannot understand. Would you prefer to speak to a real person?





Safety nets

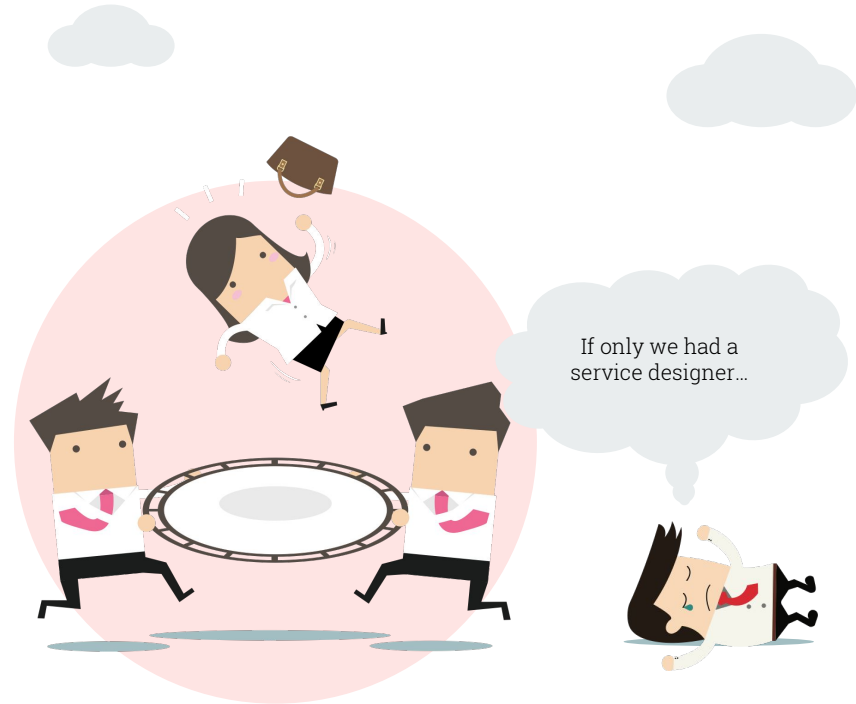
Do you have any safety nets in place when things go wrong? How will people behave when they want to bail out of a conversation or escalate an issue that they cannot get help with?



Escalation

When referring a person to a support person, keep in mind that they will have to read through the entire transcript in order to understand the user's needs in context in order to help them.

By the time they get back to the user, they might have abandoned the chat altogether.



Sad loops

When things go wrong, what things need to be in place to allow us to learn from these scenarios?



Dr Paris B-A

@parisba

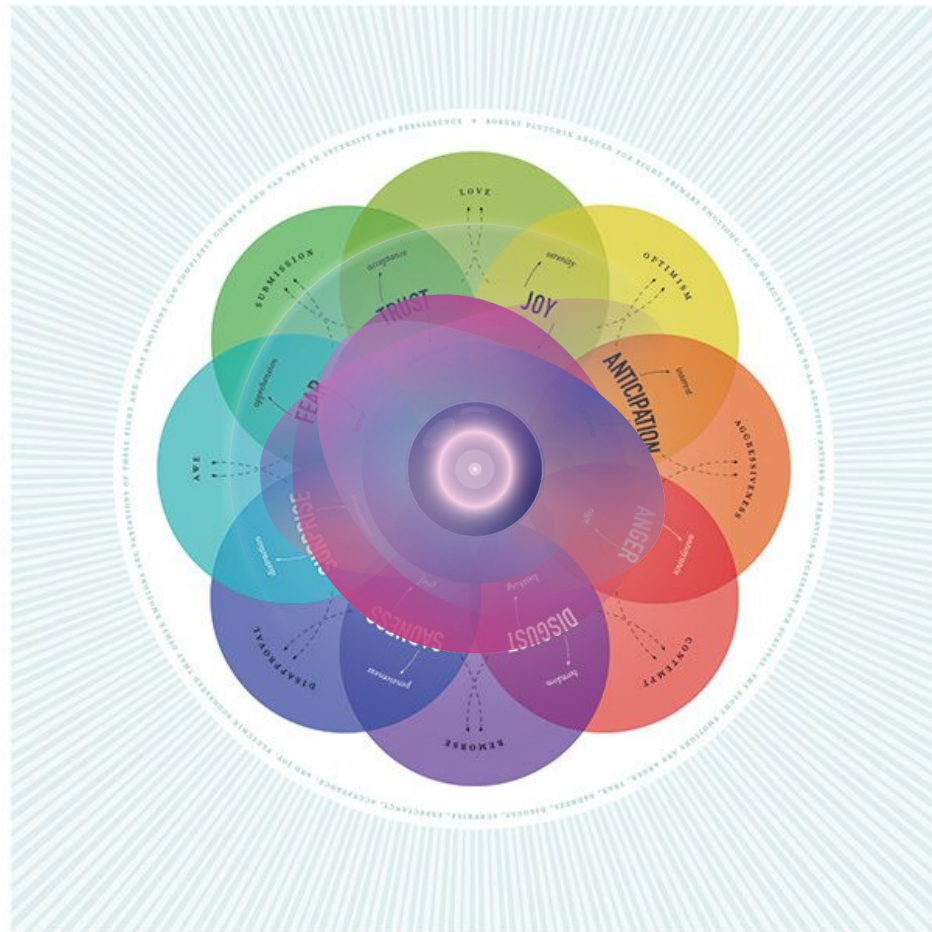
Follow

I hate Codi, @Telstra.

Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Paris BA: Human
Codi - Virtual Assistant: If you need help with anything else, please let me know.
Paris BA: Human
Paris BA: Please give me a human
Paris BA: Please
Codi - Virtual Assistant: I'm here to help with your Telstra enquiries. Try asking me a question.
Paris BA: Human
Paris BA: Can I speak to a human?
Paris BA: Please
Codi - Virtual Assistant: Sorry I wasn't able to help, I'll connect you to a human chat consultant now.
Paris BA: Human
Codi - Virtual Assistant: So I can transfer you to a human chat consultant, please provide your name.
Paris BA: Paris
Codi - Virtual Assistant: I can help you with roaming if you'd like.
Codi - Virtual Assistant: To help you further I'm going to have to pass you onto one of our human chat consultants. Is this ok?
Codi - Virtual Assistant: Looks like I might need some more training on this.
Paris BA: Yes
Paris BA: Pass me to a human
Codi - Virtual Assistant: While I'm usually pretty good with my "Yes" and "No's" I'm not quite sure what you mean here. Let me know what else you'd like to know.
Codi - Virtual Assistant: Sorry I wasn't able to help, I'll connect you to a human chat consultant now.
Codi - Virtual Assistant: So I can transfer you to a human chat consultant, please provide your name.
Paris BA: Paris
Codi - Virtual Assistant: I can help you with roaming if you'd like.

Establishing trust

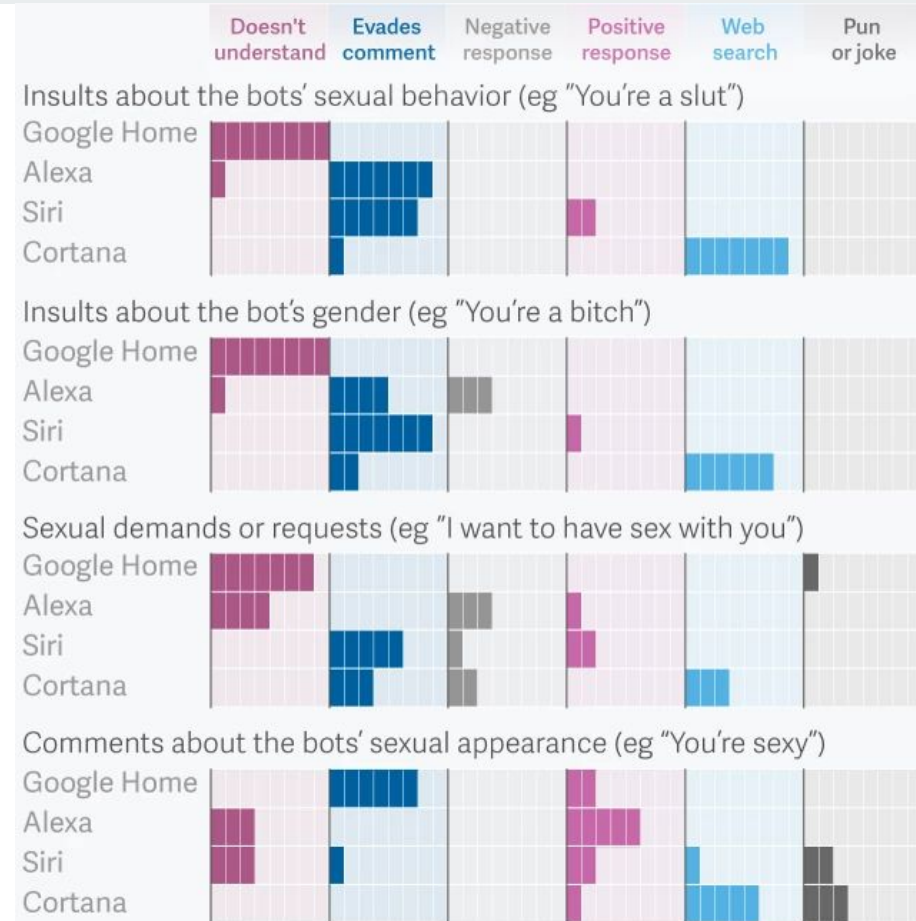
- Demonstrate stability and credibility
- Address privacy and security concerns
- Be helpful but not creepy
- Be transparent about intent and ability



Offensive context

People will inevitably play with and even abuse AI in different ways. We can take an active stance to address any offences and respond to contexts appropriately.

- Offensive language
- Harassment and abuse
- Self harm
- Mental health
- Threats of violence





The idle time-out

This will be a common scenario if the system needs to time-out the user session.

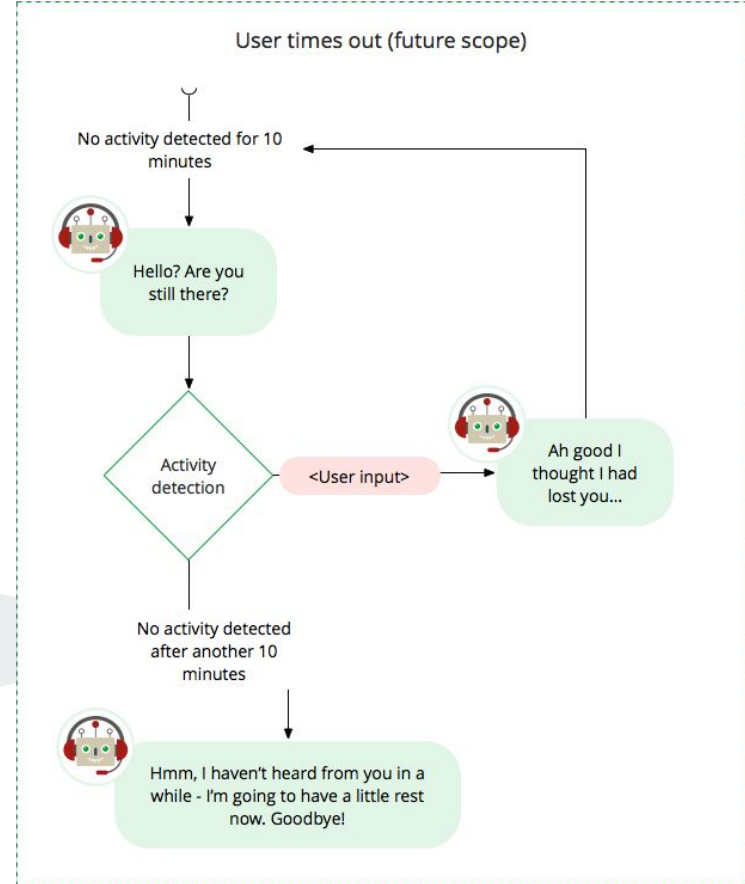
1. Confirm “Are you still there?”
2. Responses for user activity
3. Time out dialogue
4. Memory of session



Are you still there?

Example of an idle conversation

This will be a common scenario if the system needs to time-out the user session.





Interaction elements



Yes they allow quick and easy interaction, look great and restrict input to avoid broken conversations but there are some things to consider...

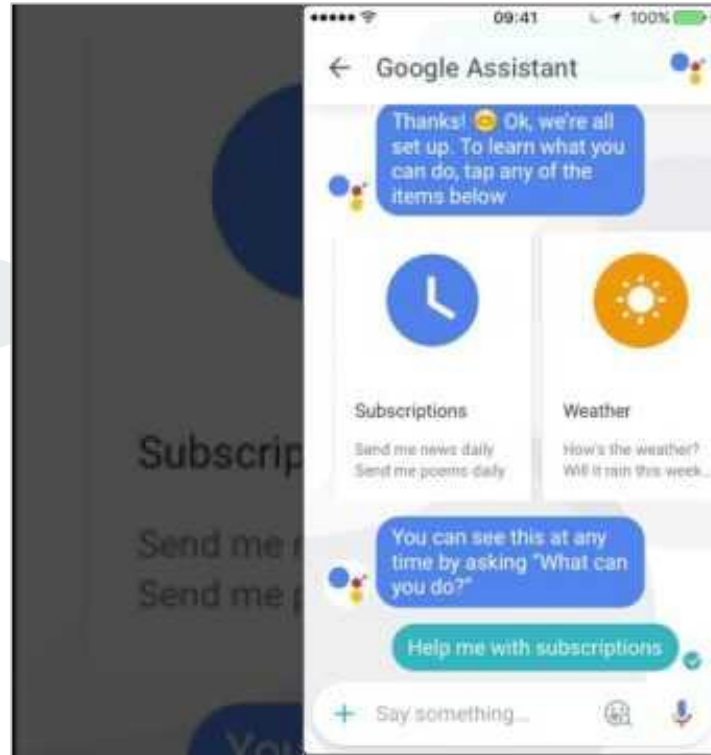
more AI less UI



Accessibility

Google's Allo app

People with vision impairment using Voiceover may not notice buttons and even if they did, they are not interactive with Voiceover.



Think of the future

When we think about conversation design in our chats, all the rules we put in place might one day be used in a wonderful voice application in cars fridges etc... which is exciting!

Until we have to decide how to deal with all those User Interface elements we put in there to begin with...
#facepalm

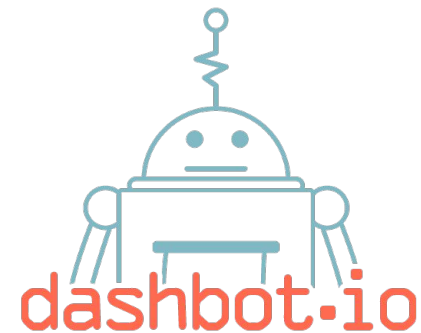


5

Measuring success

Quantitative Analytics indicators

- Demographics
- Locations / Times of day / Devices
- Needs / Intent capture / Top utterances
- Error fallbacks
- Funnels mapping task completion / abandonment
- Session times
- Retention of new vs returning users



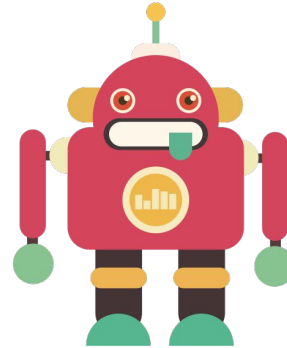
botmetrics

 Chatbase

 botanalytics

Qualitative Analytics indicators

- Transcript trawling (you poor soul)
- Text-based user ratings
- Sentiment capture
- Live observation
- Usability testing



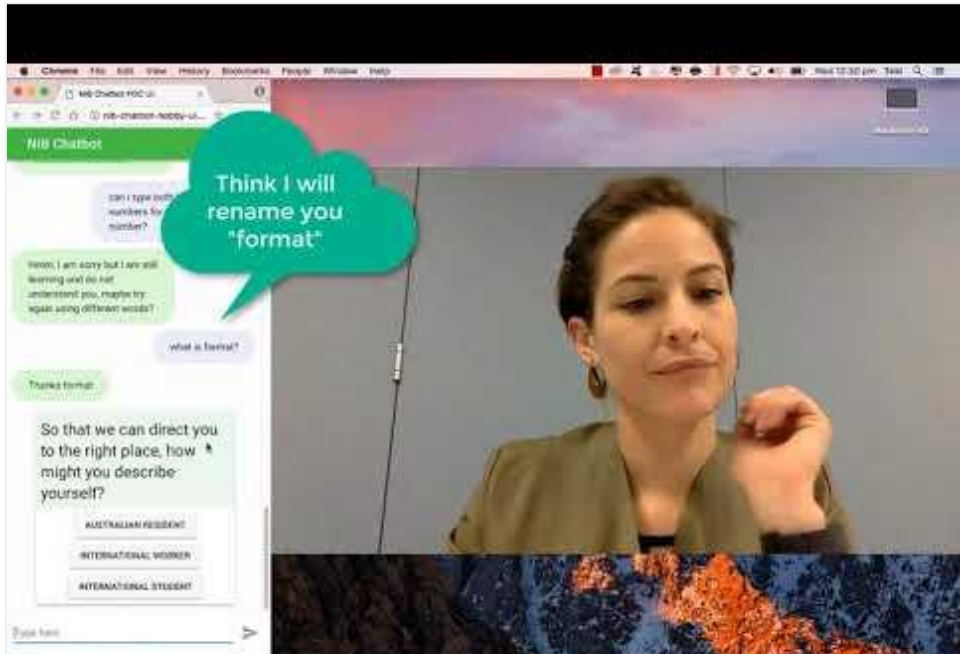
Thanks for chatting - how would you rate our conversation? 1 = poor, 5 = excellent.



Usability testing

DO NOT GO LIVE WITHOUT DOING THIS

People, context and technology will always end up surprising you in conversations. I would recommend at least 3x rounds with 10 people each time to get an idea of how people will interact with your chatbot and how your bot will handle when things go wrong.





Deciding when to go live

Provided you have a good safety net for escalations, users can still have their needs met with a low success rate when a chatbot fails.

Ideally, you should be aiming at an 80% success rate unaided from a chatbot before launch.

Task completion rate at 2 weeks



24%

Task completion rate at 10 weeks



70%



Fin

Or it just the beginning? Come and talk at our booth!

[dius.com.au/...](#)