

The logo consists of a dark red speech bubble with a tail pointing downwards and to the left. Inside the bubble, the text "rachel talks" is written in a lowercase, sans-serif font, and "design" is written in a larger, bold, lowercase, sans-serif font below it.

rachel talks
design

User Experience Best Practices for Chatbots

Rachel Beser Brookes

“A chatbot, or “chatterbot”, is an AI-powered tool that simulates human communication via an in-app chat interface. Depending on the primary purpose of such an app, it can simulate an actual conversation, answer questions, or even perform simple tasks.”

Valeriia Timokhina / July 2017, Eastern Peak

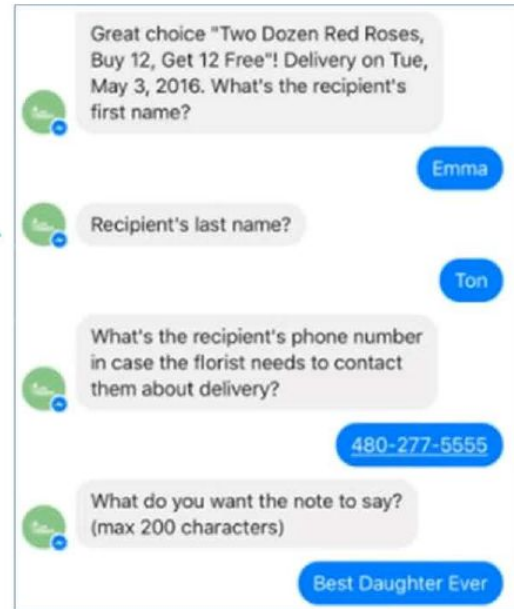
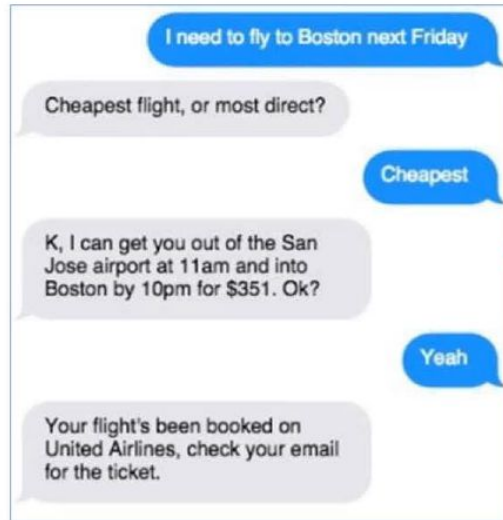
“A chatbot is a domain-specific text-based conversational interface that supports users with a limited set of tasks.”

Raluca Budiu, November 2018

“Chatbots allow you to interact with a smartphone as you would with a person. You can text or speak independently or through Facebook, Slack, Kik, & LINE. They use NLP, AI & speech recognition & synthesis. Successful chatbots follow the rules of normal human conversation.”

Cliff Anderson, Sr Usability Engineer, Ally Financial, June, 2017

Good Example



Why chatbots?

Personalization at scale

Humans are designed for conversation

By 2022, 70% of white collar workers will interact with conversational platforms on a daily basis

By 2021, 30% of government service interactions will be done partially or full, through an AI-powered conversational channel

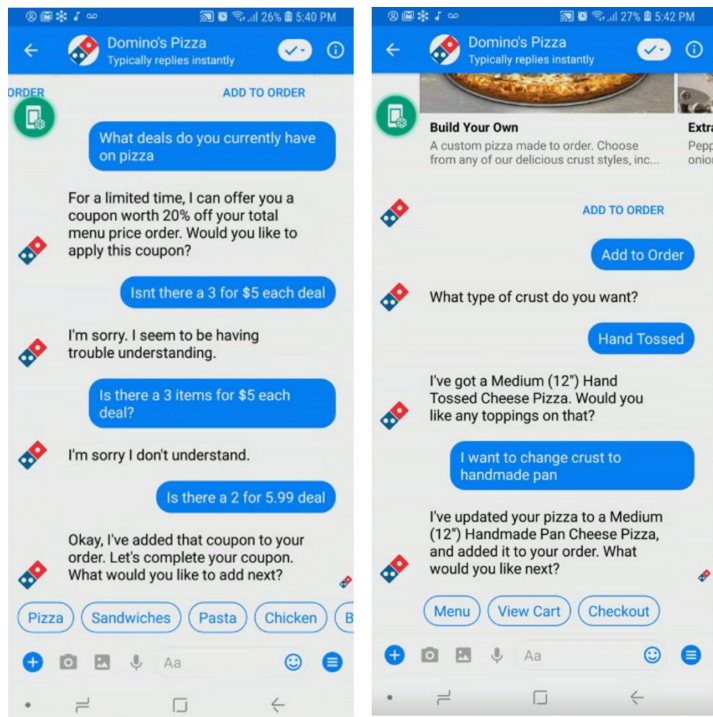
How to interact with chatbots?

Predetermined links and buttons saved users from typing.

Text allowed users some flexibility in choosing the types of questions they wanted to ask and enabled them to deviate from the (often too strict) script of the chatbot.

Good example: interaction bot

Change crust late in the flow. Still follows a linear flow like Alexa.



Guidelines



Guidelines

Be conversational

Don't trap the user

Project a personality

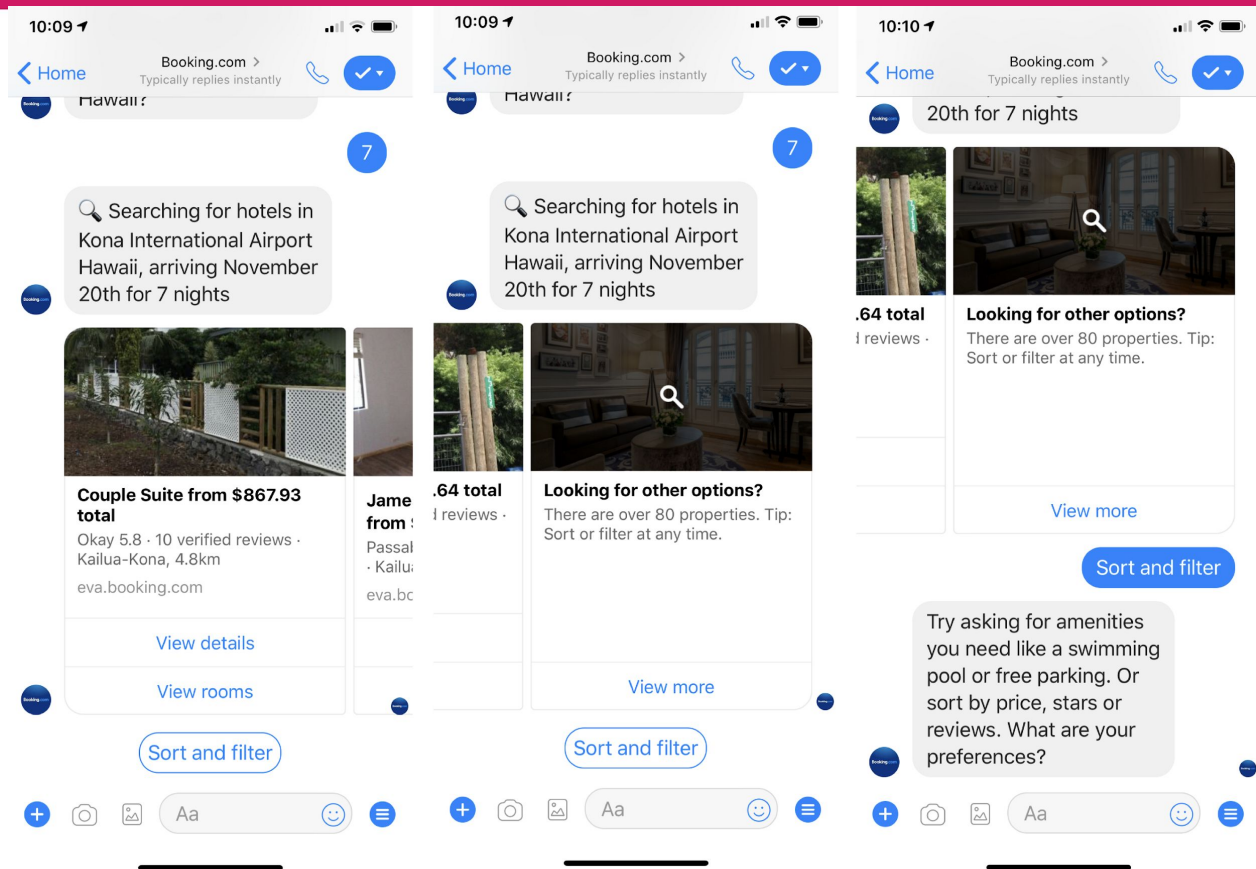
Focus the dialog and deal with interruptions

Be proactive

Replicate interaction design best practice

Bad Example

Carousels, the UI element that bots use for showing sets of results, are simply not the best choice for displaying long lists.



Guidelines

Be up front about using a bot and not a human

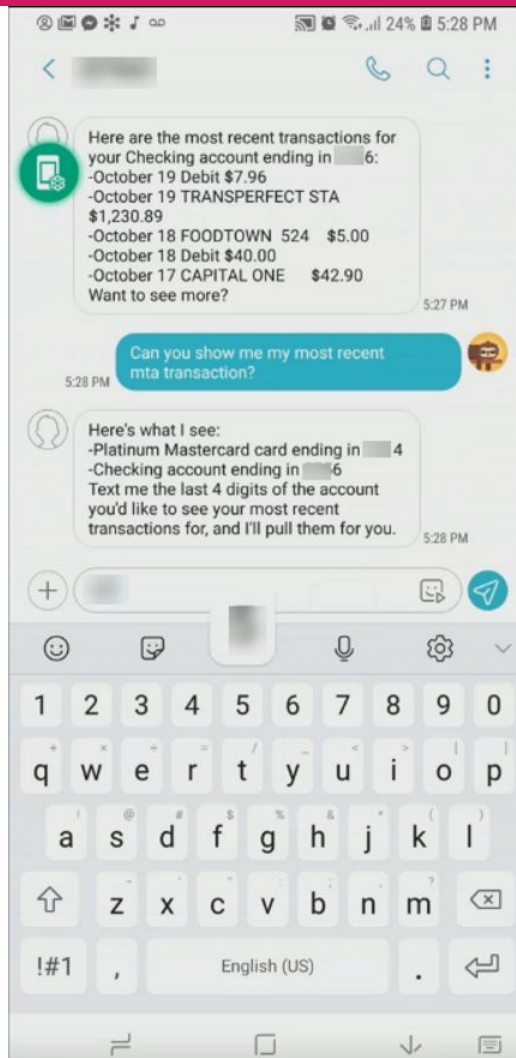
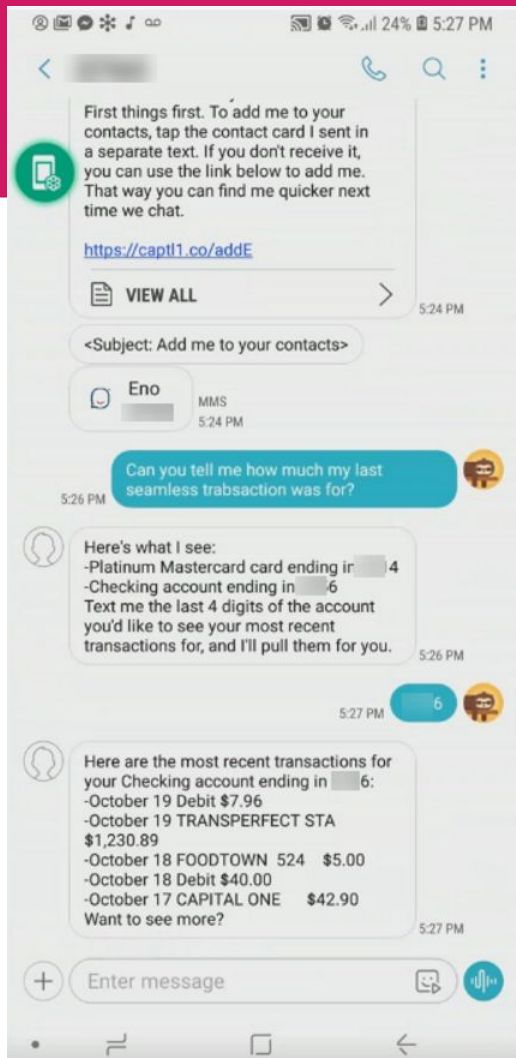
Own failure and offer an escape like directing to a live agent or providing a contact number with operational hours

If bot has a distinct personality, stick to the script

Be honest about not understanding

Bad Example

Capital One's text-message based bot. He happened to have two credit cards from Capital One, and each time he asked a question, the bot forced him to clarify which account the query referred to, without transferring context from one interaction to the next.



Guidelines

Create bot for simple tasks

Tolerate typos and ambiguity

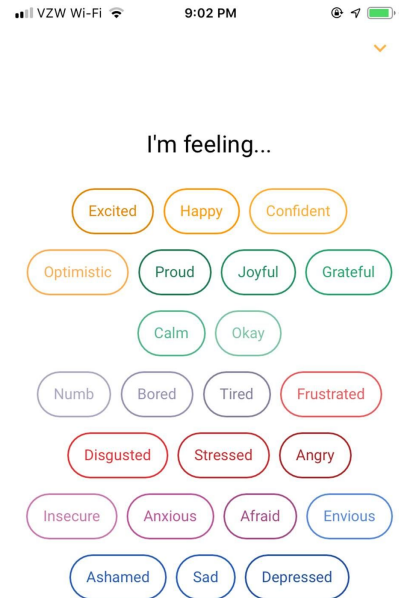
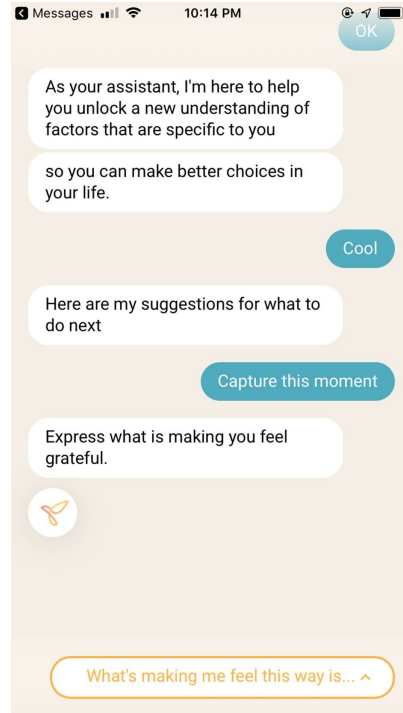
Allow sorting and filtering results

Save information from one task to the next

Program flexibility: infer context and jump around linear flow

Good example: interaction bot

Predetermined links/buttons



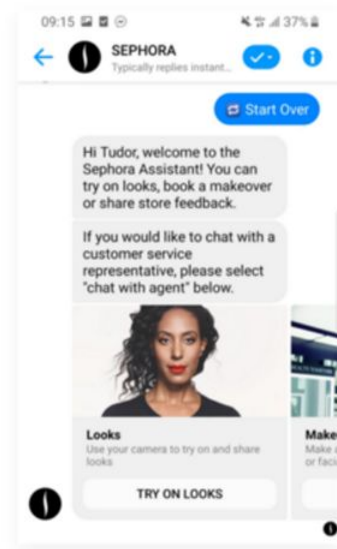
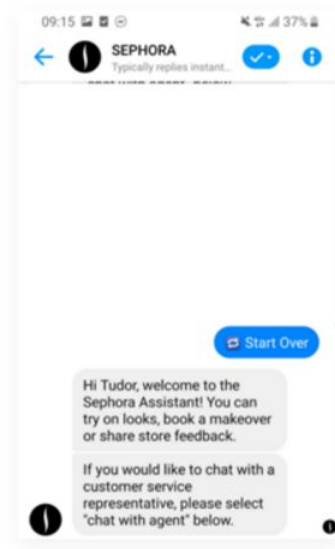
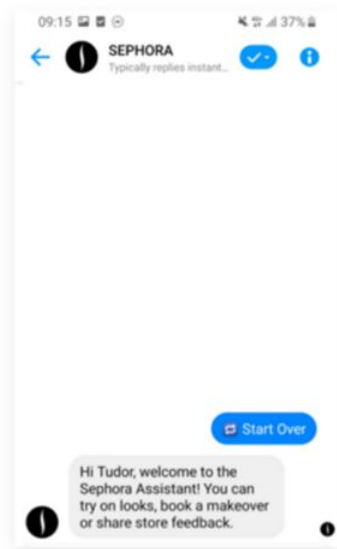
Writing Content for Bots

Content that's designed for bots must have:

- Short and precise content bites that are quick to consume
- Emoji's for meaningful, visual attention
- A high balance of images and gifs throughout





Bad example: sending multiple messages

“Our eyes don't read a single line of text at a time, we read in saccades making quick jumps across multiple lines, stopping shortly for some words.”



10Pearls' Research on Chatbot Use, 2018

Accuracy and preference by assistant

				
	Alexa	Hound	Google Assistant	Siri
ACCURACY	50%	74%	59%	77%
PREFERRED	35%	21%	21%	14%

Case Study

<https://chatbotsmagazine.com/how-we-analyzed-200k-messages-to-design-a-chatbot-264a13724752>

“We didn’t have data to inform us of which dialogs would be most useful for users, because we didn’t know what they want to know.”

Diana Lee

Case Study from Diana Lee at Stello

Analyzed 200K messages a major real estate company received from site visitors over the course of six months to determine:

- Most frequently asked questions/ requested service
- The topics and the distribution of questions in the topics
- What the visitor was trying to achieve by asking these topics (intents)

“Put simply, we want to make data-driven decisions.”

Diana Lee

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Case Study from Diana Lee at Stello

Used **intent clustering** to analyze chat history between two humans.

Put it through an algorithm that determines clusters of sentences with similar meaning, known as **semantic clustering**.

Prioritize which phrases to train the chatbot to understand Natural Language Processing (NLP) and which ones command-and-response static answer

Case Study from Diana Lee at Stello

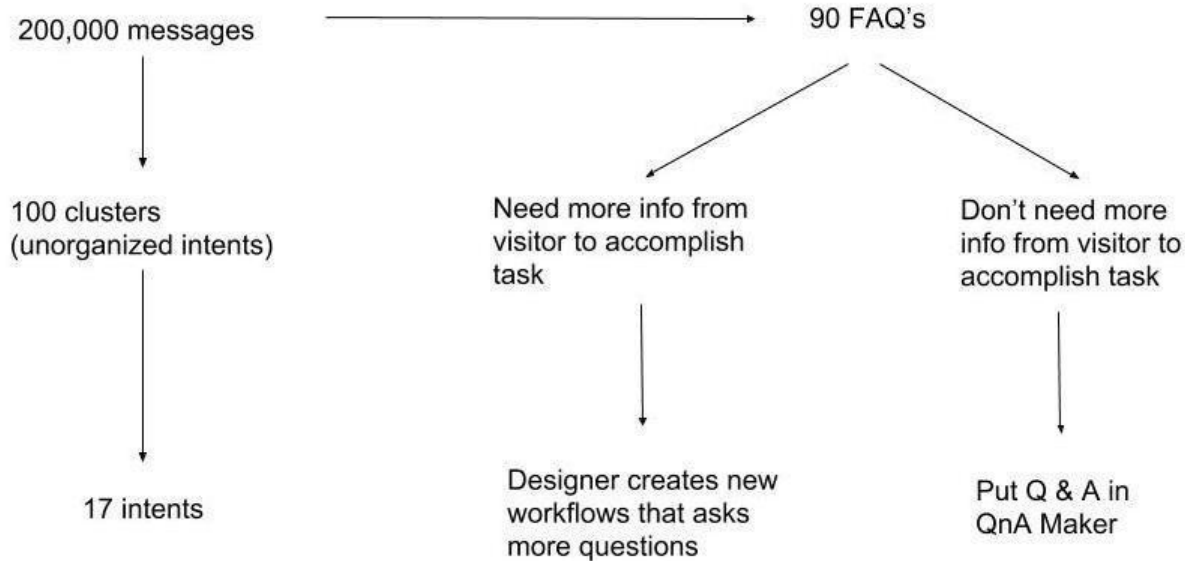
The messages were 90 FAQ's, and through human effort, she put them in 3 buckets to design the UX:

- Questions that can have an automated answer
- Questions that require a string of questions to get contextual information before answering
- Questions that require the bot to connect the visitor to a human agent for the accurate answer

Case Study from Diana Lee at Stello

The designer takes these intents and FAQ's to design workflows to take people through when they ask a question or make a request.

Case Study from Diana Lee at Stello



Recommendations

Recommendations

Avoid poor-performing and overlapping chatbot solutions by screening vendors carefully and avoiding providers that cater for single use cases.

Reduce the risk of failure by sourcing your chatbots from external providers, unless your organization already has the right data science and machine learning assets.

Recommendations

Secure funding and monitoring resources for **ongoing model maintenance** to ensure that your chatbots will continue to perform well

Prepare for the day when users expect **voice-enabled chatbots** by specifying voice support in your solutions.

Recommendations

Incorporate tone, emotion, personality and other soft features into your chatbot solutions by acquiring linguistics skills.

The best-performing chatbots tend to have a very narrow scope in the number of intents that they attempt to address.

How to Measure Success

Q&A

Sources

Valeriia Timokhina / July 2017, Eastern Peak

Raluca Budiu, November 2018

Cliff Anderson, Sr Usability Engineer, Ally Financial, June, 2017

Gartner: governance and best practices

Gartner: Government Must Deliver a Consistent User Experience Across All Virtual Assistants and Chatbots

Sources

<https://www.nngroup.com/articles/chatbots/>

Chatbot training by Neilson Norman Group 2017

<https://www.nngroup.com/online-seminars/usable-chat-bots/>

<https://chatbotmagazine.com/conversational-interfaces-need-a-different-content-management-system-b105bb6f716>

<https://uxdesign.cc/10-things-i-wish-i-knew-before-i-started-designing-bots-8620fb51ef73>

Sources

<https://chatbotsmagazine.com/how-we-analyzed-200k-messages-to-design-a-chatbot-264a13724752>

Gartner: 'Use Master Chatbots to Improve Conversational Experiences'