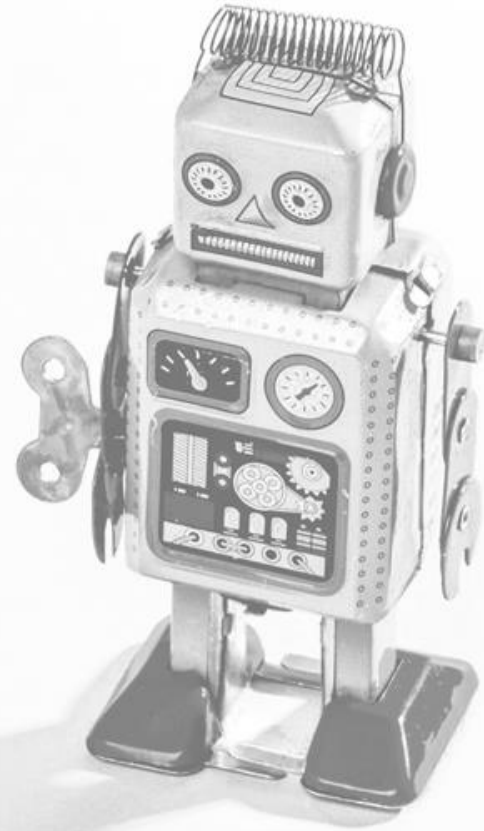
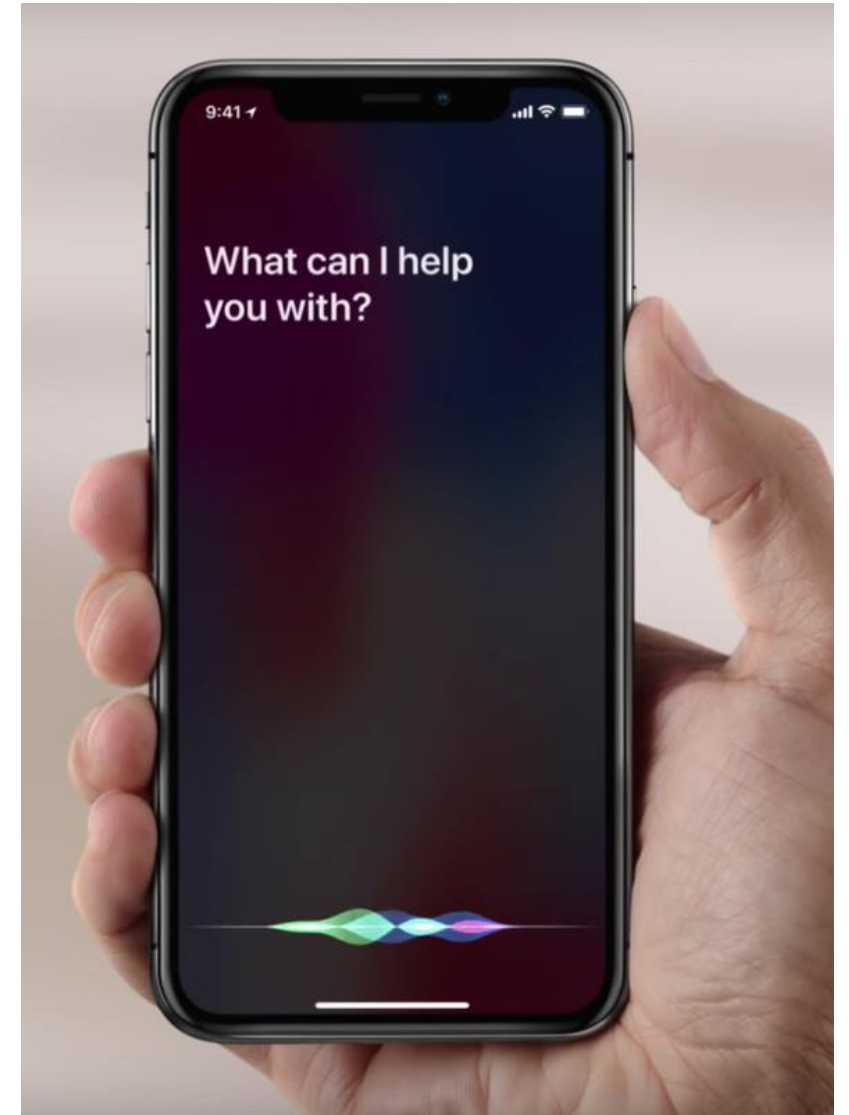
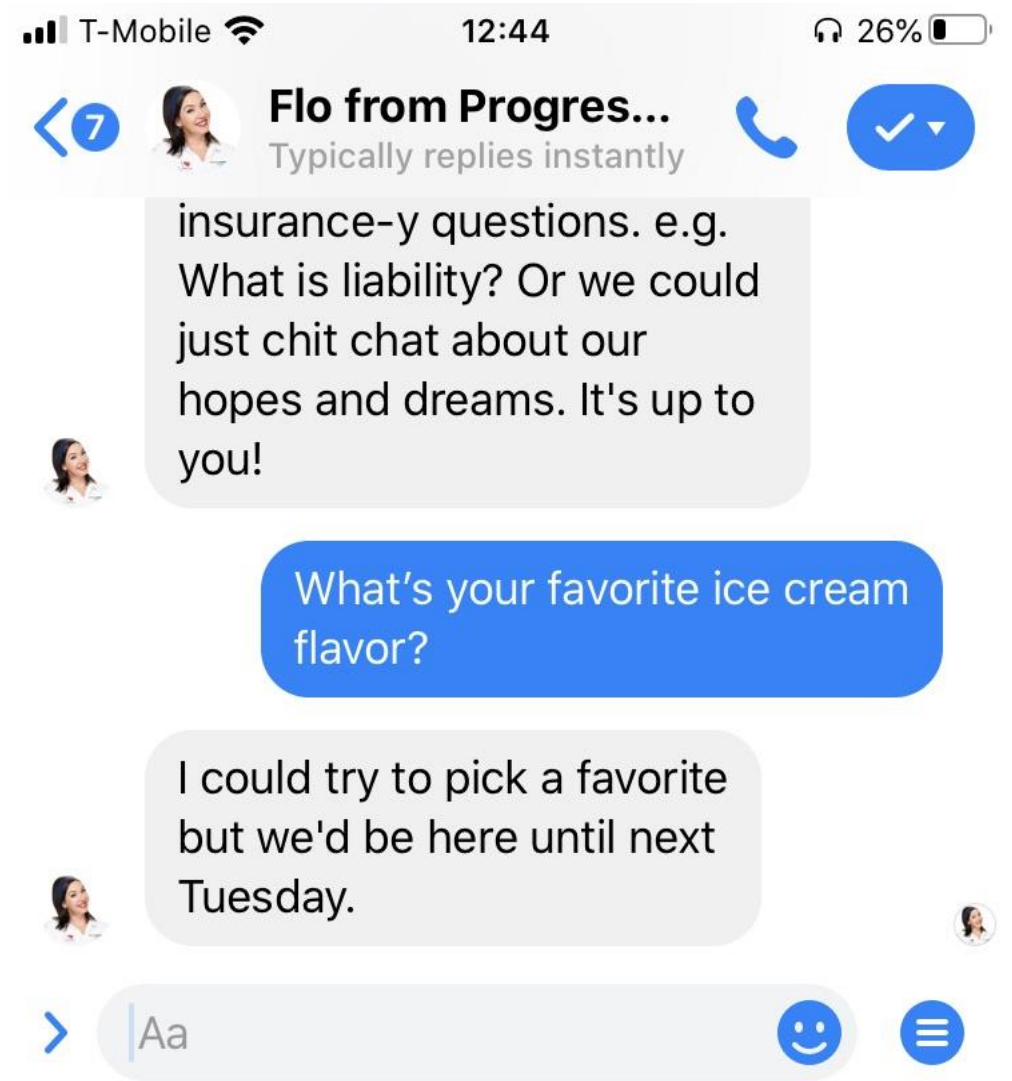


Production Ready Chat Bots

Bert Wagner



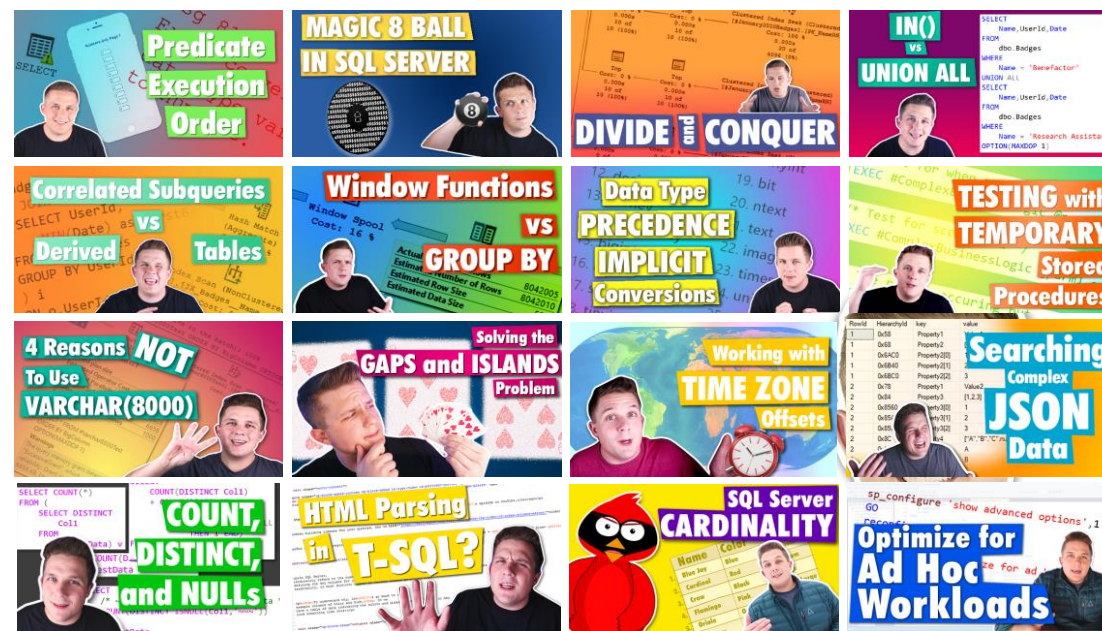




Bert Wagner

- YouTuber and Blogger
- Developer
- <https://bertwagner.com>
- bert@bertwagner.com
- Slides: bertwagner.com/chatbots

SQL WITH BERT



@bertwagner



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com

Why Chat Bots?

Willingness of **millennials versus older generations** to **use chatbots** in **these situations**:



Drive-thru fast
food restaurant

MILLENNIALS



VS.

OLDER GENERATIONS





Retail stores

MILLENNIALS



VS.

OLDER GENERATIONS



Insurance
companies

MILLENNIALS



VS.

OLDER GENERATIONS



Banks/ financial
institutions

MILLENNIALS



VS.

OLDER GENERATIONS



MILLENNIALS

OLDER GENERATIONS



Medical offices

MILLENNIALS



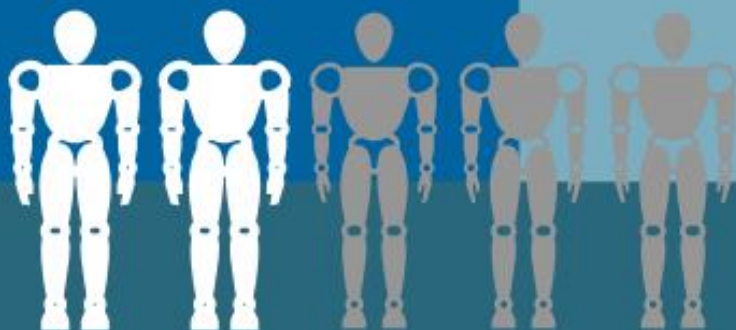
29%

VS.

OLDER GENERATIONS



15%



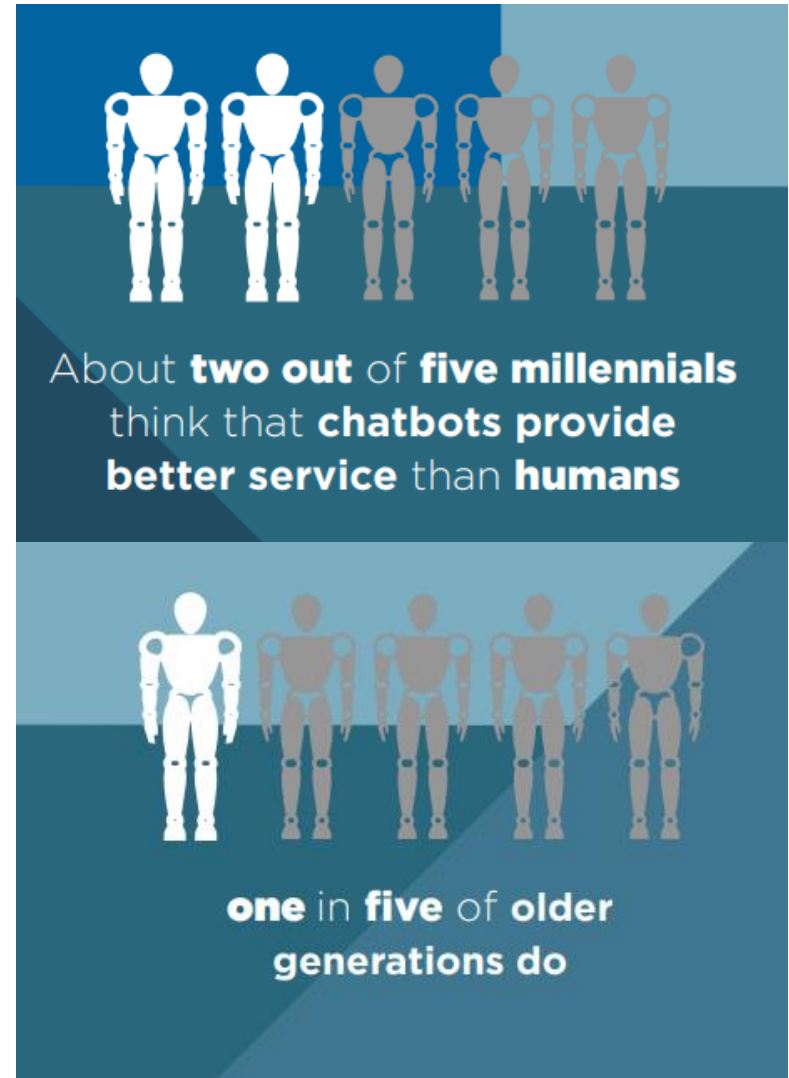
About **two out of five millennials**
think that **chatbots provide**
better service than **humans**



one in five of **older**
generations do

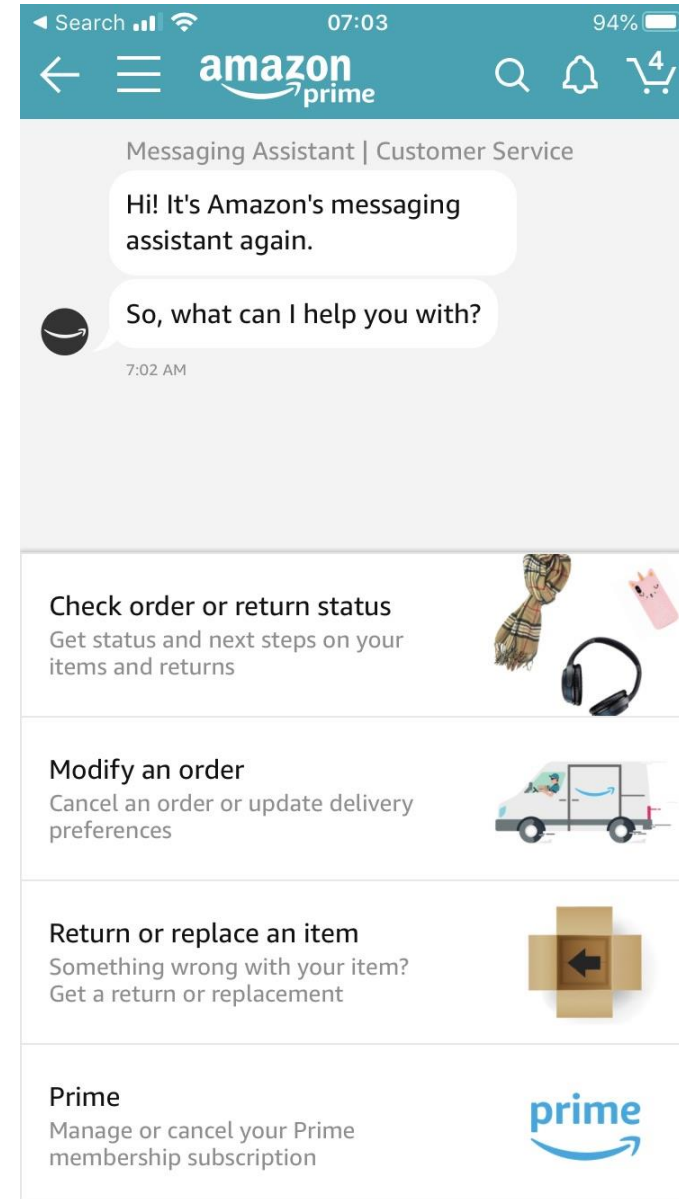
Why Chat Bots?

- User preferences



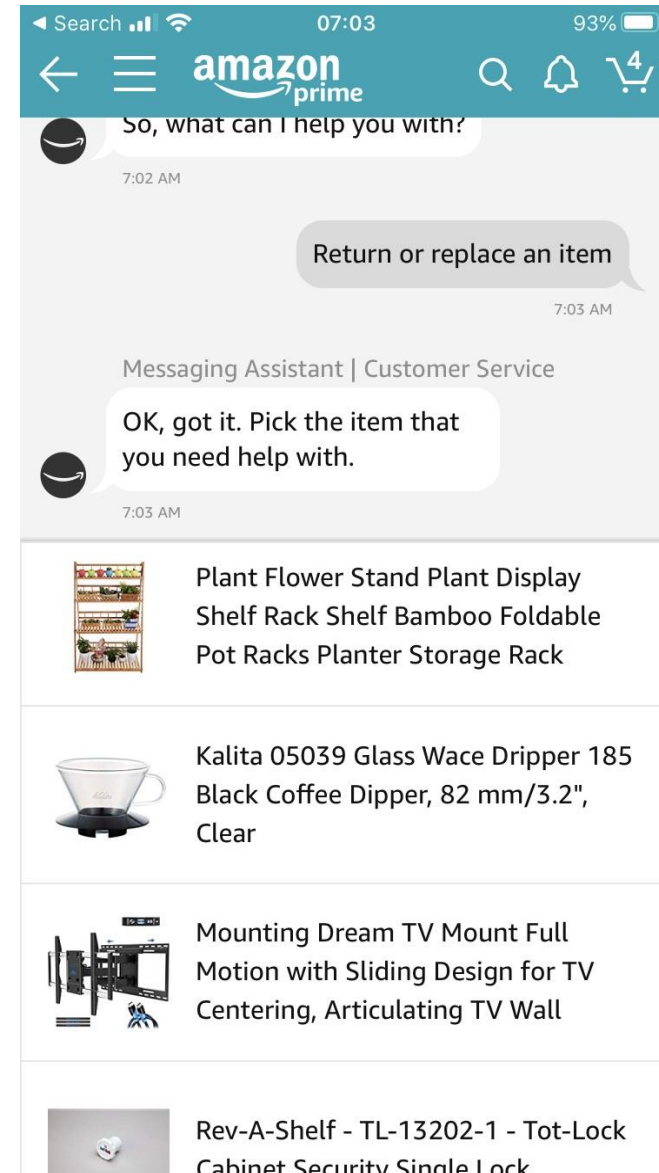
Why Chat Bots?

- User preferences
- User experience



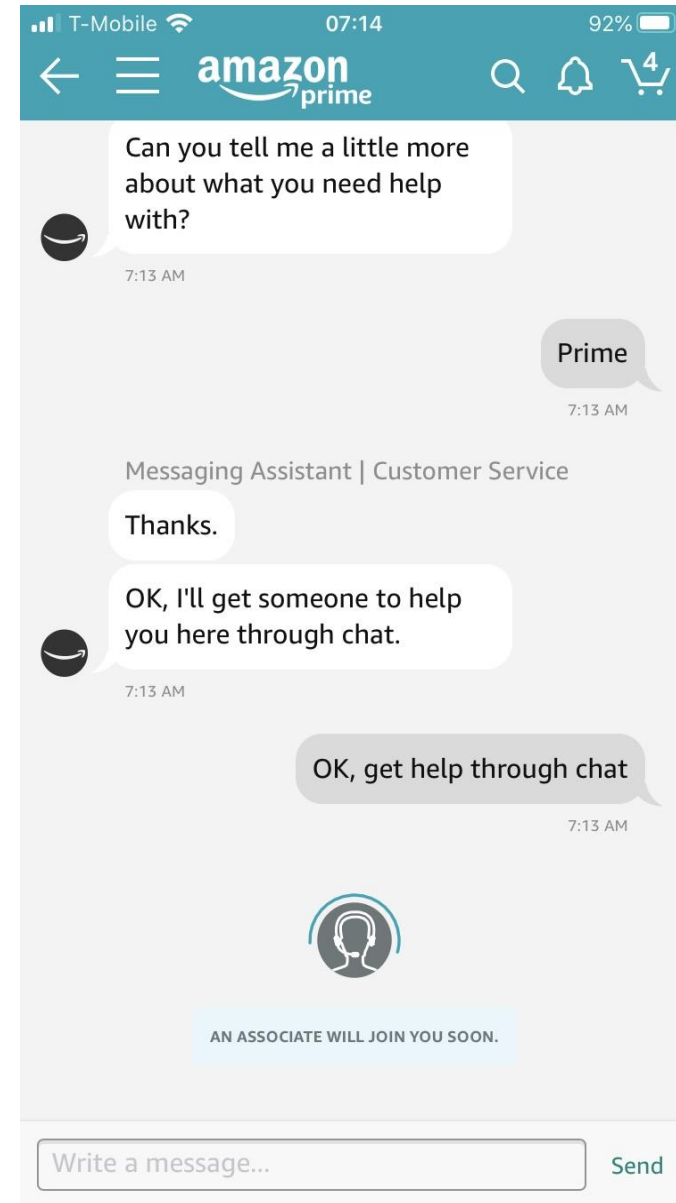
Why Chat Bots?

- User preferences
- User experience
- Accuracy



Why Chat Bots?

- User preferences
- User experience
- Accuracy
- Triage

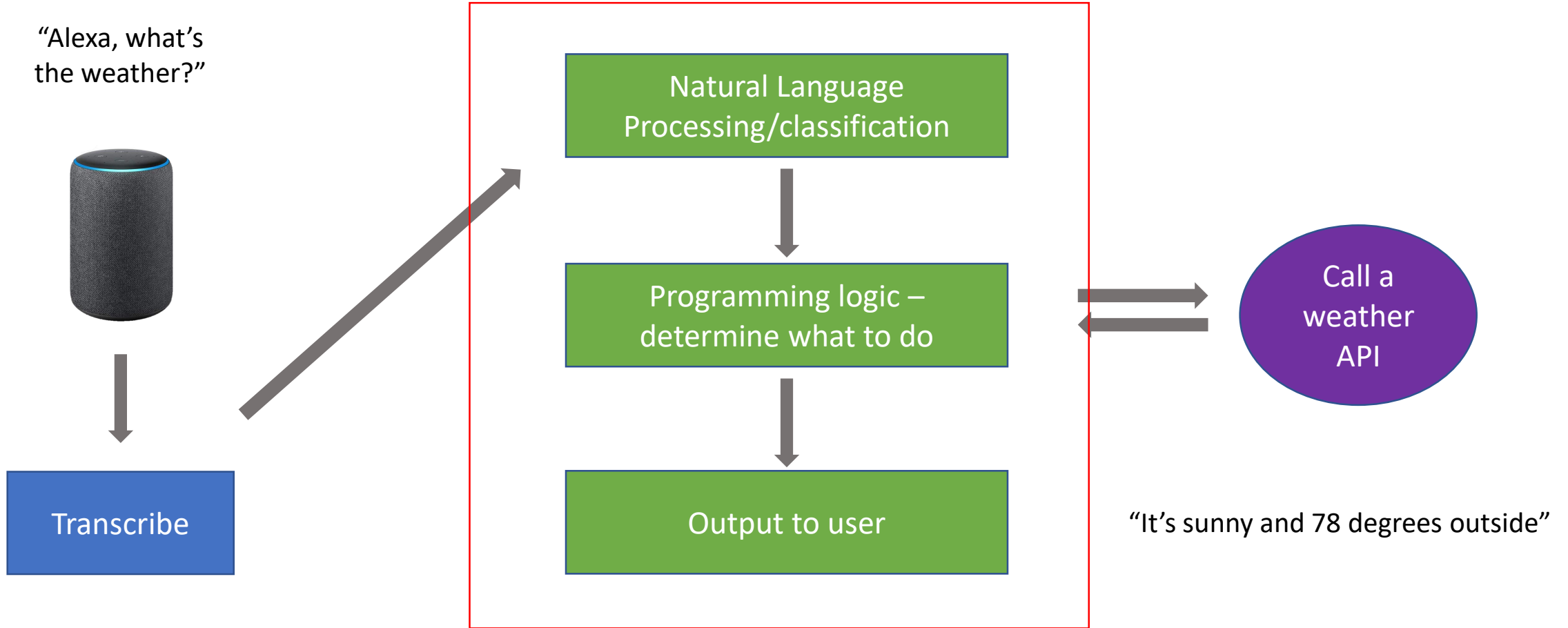


Anatomy of a Chat Bot

“Alexa, what’s the weather?”



Anatomy of a Chat Bot



Qualities of a Good Chat Bot

- Empathy



Qualities of a Good Chat Bot

- Empathy



Qualities of a Good Chat Bot

- Empathy
- Non-repetitive



Qualities of a Good Chat Bot

- Empathy
- Non-repetitive
- Handles unexpected cases



Qualities of a Good Chat Bot

- Empathy
- Non-repetitive
- Handles unexpected cases
- Short circuits



Qualities of a Good Chat Bot

- Empathy
- Non-repetitive
- Handles unexpected cases
- Short circuits
- Capture multiple inputs all at once



Choosing a Tool

Open Source

- NLTK
- spaCy
- Transformers
- ...



Choosing a Tool

Open Source

- NLTK
- spaCy
- Transformers
- ...

NLP as a Service

- Microsoft LUIS
- Amazon Comprehend
- Google Cloud Natural Language API
- IBM Watson NLU



Choosing a Tool

Open Source

- NLTK
- spaCy
- Transformers
- ...

NLP as a Service

- Microsoft LUIS
- Amazon Comprehend
- Google Cloud Natural Language API
- IBM Watson NLU

Full Service

- Azure Bot Service
- Amazon Lex
- Google Dialogflow
- IBM Watson Assistant



Choosing a Tool

Open Source

- NLTK
- spaCy
- Transformers
- ...

NLP as a Service

- Microsoft LUIS
- Amazon Comprehend
- Google Cloud Natural Language API
- IBM Watson NLU

Full Service

- Azure Bot Service
- Amazon Lex
- Google Dialogflow
- IBM Watson Assistant

Other considerations:

- Do you have data scientists?
- Are you in the cloud?
- Who will *own* this bot?
- What's your tech stack?
- What's your infrastructure stack?



Terminology

- Intents: the “verbs” that your users are trying to do

“Check the weather”

“Cancel a reservation”

“Turn on the Christmas lights”



Terminology

- Intents: the “verbs” that your user’s are trying to do
- Entities: the “nouns” of what we are acting on

“Check the weather”

“Cancel a reservation”

“Turn on the Christmas lights”



Demos



@bertwagner



bertwagner.com



youtube.com/bertwagner



bert@bertwagner.com