Build Voice-Enabled Experiences with Alexa

Sohan Maheshwar, Alexa Evangelist

@AlexaDevs
4.54 billion years
200,000 years
100,000 years
VOICE REPRESENTS THE NEXT MAJOR DISRUPTION IN COMPUTING
30,000+ SKILLS
and growing every day
Alexa Frameworks

Lives In The Cloud
Automated Speech Recognition (ASR)
Natural Language Understanding (NLU)
Always Learning
Create Great Content: ASK is how you connect to your consumer

Alexa Frameworks:

- **ALEXA SKILLS KIT**
  - Lives In The Cloud
  - Automated Speech Recognition (ASR)
  - Natural Language Understanding (NLU)
  - Always Learning
Alexa Frameworks

**Alexa Skills Kit**

*Create Great Content:*
ASK is how you connect to your consumer

**Alexa Voice Service**

*Unparalleled Distribution:*
AVS allows your content to be everywhere

- Lives In The Cloud
- Automated Speech Recognition (ASR)
- Natural Language Understanding (NLU)
- Always Learning
Building for Voice with Alexa
Alexa Skills Kit

Audio

Speech Recognition
Machine Learning
Natural Language Understanding
Text to Speech

Request
Response

Your Service

amazon alexa

Cards
Alexa Skills Kit: Signal Processing

Wake word detection
Beam forming

Speech Recognition
Machine Learning
Natural Language Understanding
Text to Speech

Request → Your Service
Response ← Your Service

amazon alexa

Cards
Alexa Skills Kit: Utterances Into Intents

Utterances

Speech Recognition
Machine Learning
Natural Language Understanding

Text to Speech

Intents

Response

Your Service

amazon alexa

Cards
ASR – Automatic Speech Recognition

fôr tē tīmz
ASR – Automatic Speech Recognition

fôr tē tīmz

Forty Times? 40x
ASR – Automatic Speech Recognition

fôr tē tīmz

Forty Times?  40x

For Tea Times?
ASR – Automatic Speech Recognition

fôr tē tīmz
Forty Times?

For Tea Times?

For Tee Times?
ASR – Automatic Speech Recognition

for tē tīmz
Forty Times?

For Tea Times?

Four Tee Times?

40x
Alexa, open Bangalore Guide and recommend an attraction

wake word  launch  invocation name  utterance
Utterances and Intent

Alexa, open Bangalore Guide

Recommend an Attraction

utterance

AttractionIntent

Intent
Utterances and Intents

Utterances:
- Hello
- How are you?
- Howdy
- What’s up?

Intent:
- HelloIntent
Alexa Skills Kit: Requests and Responses

Audio

Speech Recognition
Machine Learning
Natural Language Understanding
Text to Speech

Intents
Response
Your Service

amazon alexa

Cards

Your Service

Alexa Skills Kit: Requests and Responses

Your Service

Text to Speech

Machine Learning

Natural Language Understanding

Speech Recognition

Audio

amazon alexa

Cards
Alexa Skills Kit: Output

- Audio
- Speech Recognition
- Machine Learning
- Natural Language Understanding
- Text to Speech
  SSML, streaming audio
- Intents
- Response
- Your Service

Cards
WHAT WE’VE LEARNED:

Key Design Principles For Alexa Skills
Skills should have a **clear purpose**.
Skills should evolve over time.
Users can speak **naturally** to your skill.
Alexa should understand most requests.
Skills should **respond** in an appropriate way.
Hi, I'm Travel Buddy. I can easily tell you about your daily commute. Let's get you set up. Where are you starting from?
Hi, I’m Travel Buddy. I can easily tell you about your daily commute. Let’s get you set up. Where are you starting from?

Okay, and where are you going?
Hi, I'm Travel Buddy. I can easily tell you about your daily commute. Let’s get you set up. Where are you starting from?

Okay, and where are you going?

Great, now whenever you ask, I can tell you about the commute from Whitefield to Electronic City. The current drive time is 1 hour and twenty-two minutes. There is an accident on Hosur Road.
Hi, I’m Travel Buddy. I can easily tell you about your daily commute. Let’s get you set up. Where are you starting from?

Okay, and where are you going?

Great, now whenever you ask, I can tell you about the commute from Whitefield to Electronic City. The current drive time is 1 hour and twenty-two minutes. There is an accident on Hosur Road.

Your commute is currently one hour and two minutes.
Resources

alexa.design/codecademy
alexa.design/guide
alexa.design/India
Thank you!

Sohan Maheshwar, Alexa Evangelist
@soganmageshwar | sohanm@amazon.com
GREAT INDIAN DEVELOPER SUMMIT 2019

Conference: April 23-26, Bangalore

Register early and get the best discounts!

www.developersummit.com
@greatindiandev
bit.ly/gidslinkedin
facebook.com/gids19
bit.ly/saltmarchyoutube
flickr.com/photos/saltmarch/