

Introduction to Conversational AI

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What is Conversational AI?

Conversational AI is using Computing technology to mimic written or voice interactions between computers and people.



Chat



Voice



Text

Overview of Conversational AI



Natural Language Processing

Determine Intent of user



Machine Learning

Determine correct reply.



Text to Speech

Provide human like response to question



The Turing Test. (1950)

- Alan Turing proposed that a human evaluator would judge natural language conversations between a human and a machine designed to generate human-like responses.
- This is the benchmark of a truly conversational AI system.

Star Trek (1966) Conversational AI



<https://www.youtube.com/watch?v=1ZXuglcgn6U>

Examples of AI Conversational Technologies



Nest



Hi. I'm Cortana.



alexa

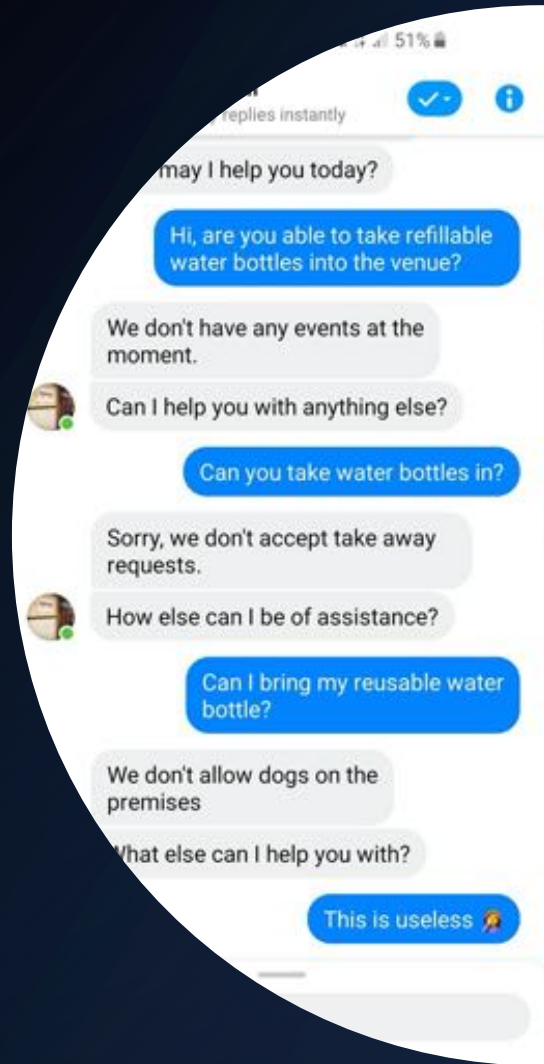


Hey Siri



Google Assistant

- Alexa
- Cortana
- Chatbots
- Google Assistant
- Nest
- Phone IVR
- Siri



Challenges with Conversational AI

Conversational AI vs Chatbot

- Chatbots tend to use static scripts.
- Such as a preprogrammed Question. That replies with a Pre-programmed response.
- Conversational AI generally uses Natural Language Processing (NLP) to determine the intent of the speaker, machine learning to figure out the correct response and provide human like reply.





Conversational AI Frameworks

For this course we will be focusing on applying concepts of Conversational AI using 2 popular frameworks

- Google Dialogflow
- Alexa

Google Dialog Flow



- Dialogflow is a natural language understanding platform that makes it easy to design and integrate a conversational user interface into mobile apps, web application, device, bot and interactive voice response systems.
- Dialogflow, you can provide new and engaging ways for users to interact with your product.
- Dialogflow can analyze multiple types of input from your customers, including text or audio inputs (phone or voice recording). It can also respond either through text or with synthetic speech.

Google Dialogflow



<https://www.youtube.com/watch?v=E96x7t4PmOw>

Alexa Skills Kit

- The Alexa Skills Kit lets you teach Alexa *new skills*. Customers can access these new abilities by asking Alexa questions or making requests. You can build skills that provide users with many different types of abilities. For example, a skill might do any one of the following:
 - Look up answers to specific questions
 - (*"Alexa, ask tide pooler for the high tide today in New York."*)
 - Challenge the user with puzzles or games
 - (*"Alexa, play Harry Potter quiz."*)
 - Control lights and other devices in the home
 - (*"Alexa, turn on the living room lights."*)
 - Provide audio or text content for a customer's flash briefing
 - (*"Alexa, give me my flash briefing"*)



Amazon Alexa Skills

(Watch the first 9m30s)

<https://www.youtube.com/watch?v=CzTKDu7Qgis>

