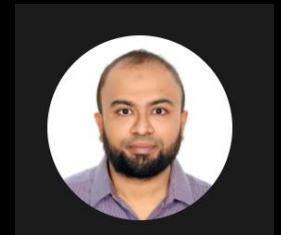


Conversational Chatbot with Amazon Lex



Mohammad Mizanur Rahman

AWS Community Leader

Partner, Brain Station 23



<https://www.linkedin.com/in/mizans/>

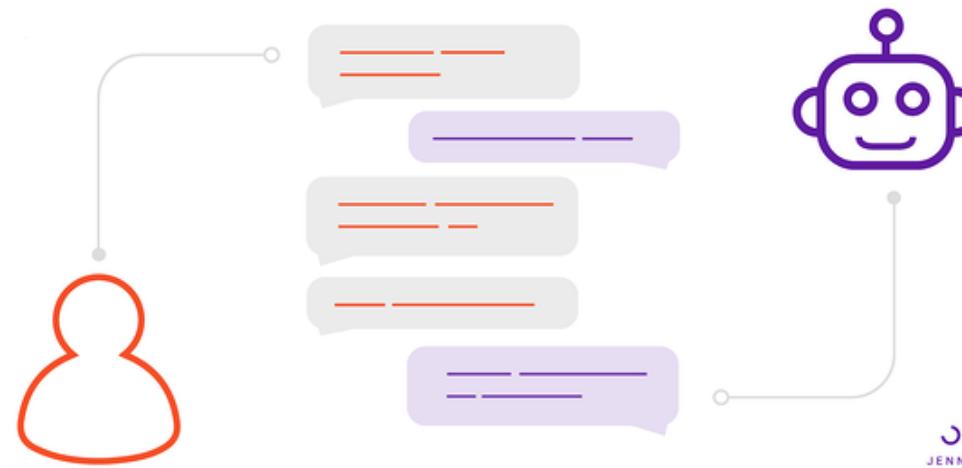
What is a bot?

A bot is a software program that operates on the Internet and performs repetitive tasks.



What is chatbot?

A chatbot is a piece of software that conducts a **conversation** via auditory or textual methods. Chatbots are virtual assistant programmed to **automatically answer** users requests.



Why?

By 2022, chatbots are expected to provide a cost savings over over \$8 billion annually.

It is predicted that 85% of all customer service interactions will be powered by chatbots within the next two years

Each chatbot in the banking and healthcare sector saves an average of over 4 minutes time, according to a 2017 study

Business Opportunities

- Call Center Bots
- Informational Bots
- Application Bots
- Enterprise Productivity Bots
- Internet of Things (IoT)



What do you need to build a chat bot?

- You do not have to be an **AI** or engineering expert to build a **chatbot**.
- The secret is to be clear about what is going to be created and what kind of **problems** will be solved.



Chatbot Platforms



Types of chatbot

Functions based on **rules**

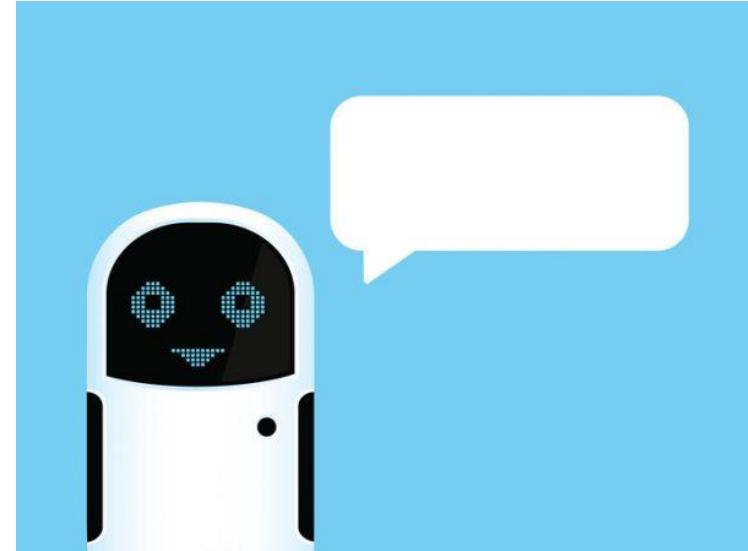
- No artificial intelligence
- Trained to do one thing
- Chatbots that don't learn !
- A scripted chatbot has a set of questions it can respond to with a corresponding set of answers.



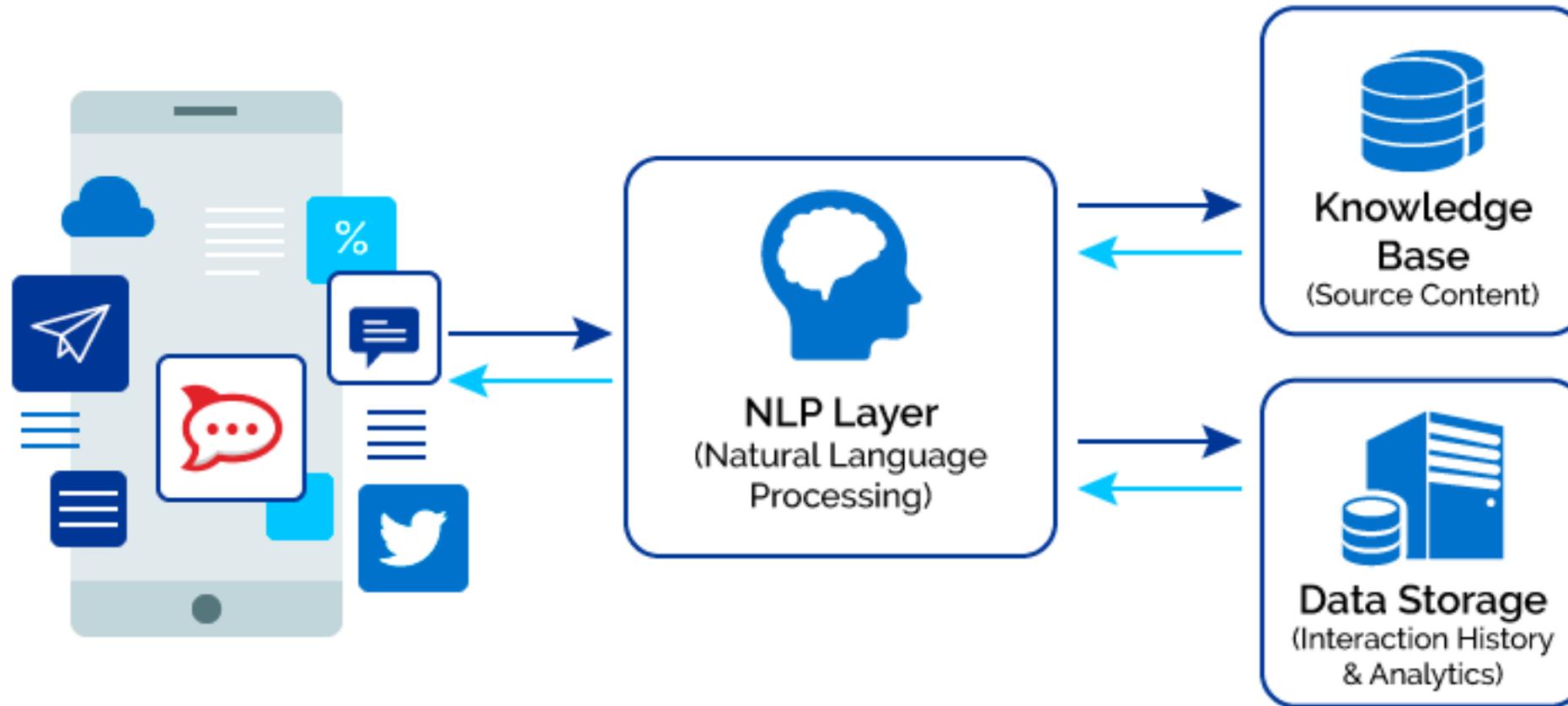
Types of chatbot

Functions based on **AI**

- Smart Chatbot
- learn from the interactions
- learn with Machine learning



How chatbots work?



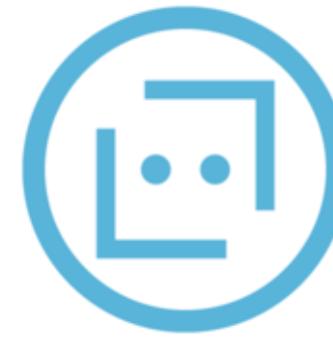
Cloud Chatbot Providers



**Google Cloud
Dialogflow**



**Amazon
Lex**



**Azure
Bot Service**

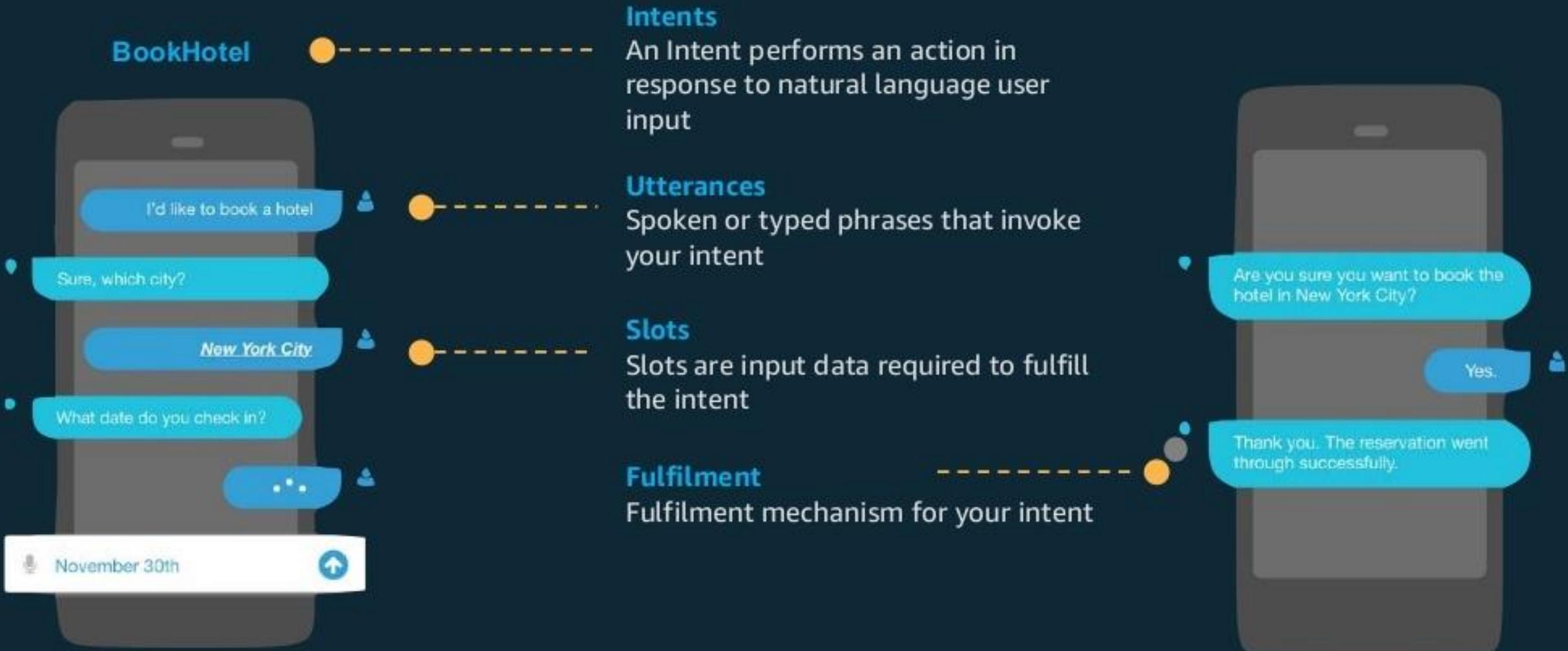
An AWS service for building conversational interfaces for applications using **voice** and **text**.



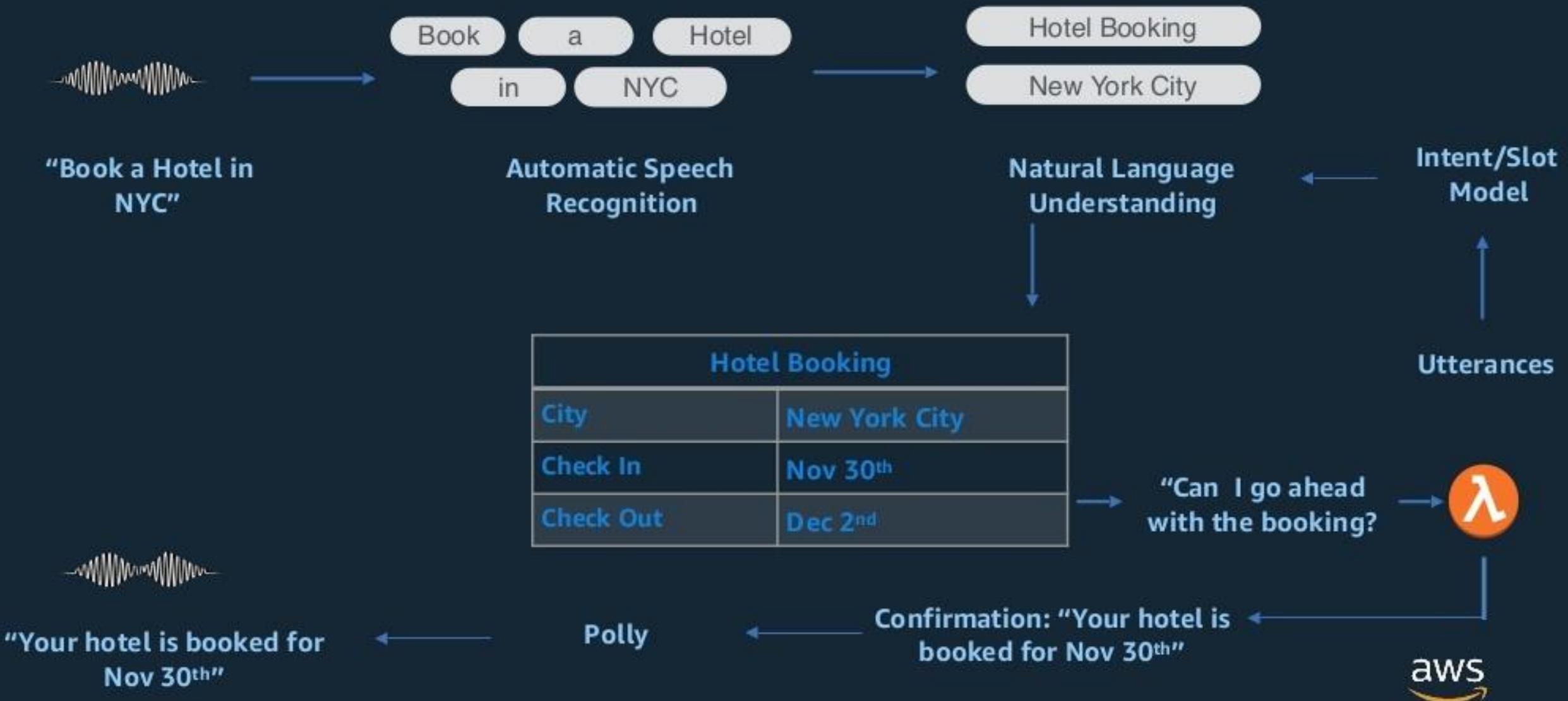
Features of Lex

- High quality speech recognition and natural language understanding
- Multi-turn conversations
- Seamless deployment and scaling
- Built-in integration with the AWS platform
- Cost-effectiveness

Amazon Lex



“Book a Hotel”



Utterances

I'd like to book a hotel

I want to make my hotel reservations

Can you help me book my hotel?

I want to book a hotel in New York City

Slots

Slot	Type	Values
destination	City	New York City, Seattle, London, ...
Check In	Date	Valid dates
Check Out	Date	Valid dates



Slot Elicitation

I'd like to book a hotel

Sure what city do you want to book?

New York City



City
New York City

Nov 30th



Check In
11/30/2017



Fulfilment



Intents and slots passed to AWS Lambda function for business logic implementation.

AWS Lambda Integration

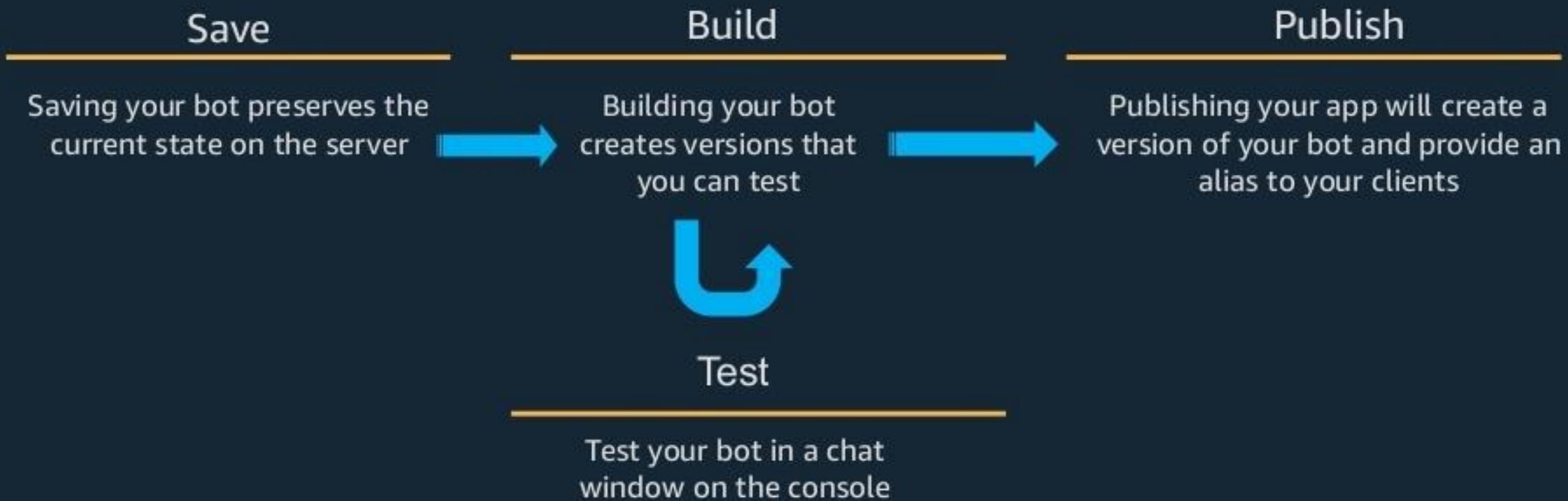


User input parsed to derive intents and slot values. Output returned to client for further processing.

Return to Client



Save, Build, and Publish



Monitoring



Missed Utterance Count



Request Latency



Traffic by Channel

Track your bot



Amazon Lex Pricing

	<u>Text</u>	<u>Speech</u>
Price per 1000 requests	\$0.75	\$4.00
Free Tier* (requests per month)	10,000	5,000

*Available for the first year upon sign-up to new Amazon Lex customers



DEMO

Thank You

mizan@brainstation-23.com



<https://www.linkedin.com/in/mizans/>