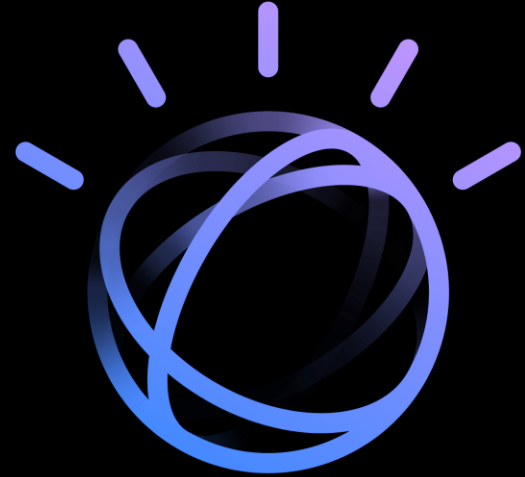


Watson Assistant Hands-On Lab



Taller 2021 – UTEC

Sobre mi...

- Santiago Souto De León.
- Estudiante de Ingeniería Telemática.
- Parte del Innovation Student Lab de IBM.
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Agenda del taller:

Introducción

- ¿Qué es un chatbot?
- Watson Assistant como chatbot.

Lab #1: IBM Cloud

- Crear el servicio de Watson Assistant.

Lab #2: Watson Assistant

- Interiorizarse en Watson Assistant.

Lab #3: Bases del diálogo

- Crear intenciones y entidades.

Lab #4: Diálogo

- Crear nodos de conversación.

Lab #5: Slots, Webhooks y Multiple Responses

- Pedir información para guardar en una base de datos.
- Dar información sobre múltiples posibilidades.

Lab #6: Digressions y Disambiguation

- Características importante para un mejor flujo del diálogo.

GitHub

<https://github.com/IBMInnovationLabUY/watsonAssistantUTEC>

📄 IBMInnovationLabUY / watsonAssistantUTEC

<> Code ⓘ Issues 🔗 Pull requests ⌚ Actions 📁 Projects 📖 Wiki 🛡 Security 📈 Insights ⚙ Settings

🔑 main ▾ 🔑 1 branch 🔖 0 tags

Go to file

Add file ▾

📄 Code ▾



SantiagoSouto Updated script and presentation pdf

ae9b789 11 hours ago ⌚ 6 commits



Entity_Import.csv

Added csv files for assistant import

4 days ago



Intent_Import.csv

Added csv files for assistant import

4 days ago



Script-HandsOnLab.pdf

Updated script and presentation pdf

11 hours ago



Watson Assistant Hands-On Lab - UT...

Updated script and presentation pdf

11 hours ago

Help people interested in this repository understand your project by adding a README.

Add a README

¿Qué es un chatbot?

Intentan imitar interacciones humanas.

Reconocimiento de lenguaje natural para responder a consultas y peticiones.

¡Watson es más que esto!

Determina cuando responder directamente y cuando acceder a recursos externos.

Puede ser entrenado gracias a su implementación de Inteligencia Artificial (AI)

Intenciones

Temas que el usuario puede querer tratar.

Entidades

Formas de especificar intenciones o patrones.

Hands-On Lab #1 IBM Cloud





Log in to IBM Cloud

Don't have an account? [Create an account](#)

Enter your IBMid [Forgot ID?](#)

IBMid
ssouto@ibm.com

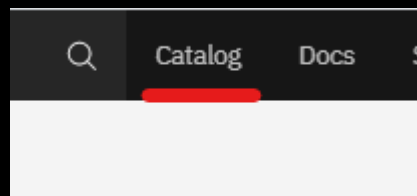
Continue



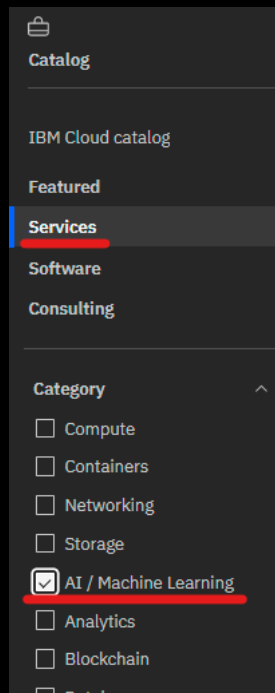
☒ Remember ID

(1)

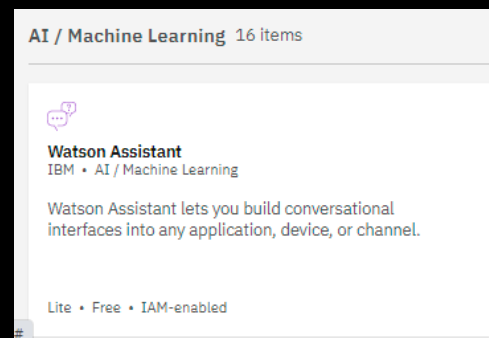
(2)



(3)



(4)



Catalog / Services /

Watson Assistant

IBM • Date of last update: 02/11/2021 • Docs • API docs

Create

About

Select a location

Select a location

Dallas (us-south)

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

Plan	Features	Pricing
Lite	10,000 Messages/Month AI-Based Intent and Entity Recognition Entity Synonym Recommendations Visual Dialog Edit with Simple Response Types (Text, Options, Images, etc...) Prebuilt Content Available Analytics Dashboard with 7 Days of Storage 5 Dialog Skills, Each with 100 Dialog Nodes Shared Public Cloud	Free

Summary

Watson Assistant

Free

Location: Dallas

Plan: Lite

Service name: Watson Assistant-td

Resource group: Default

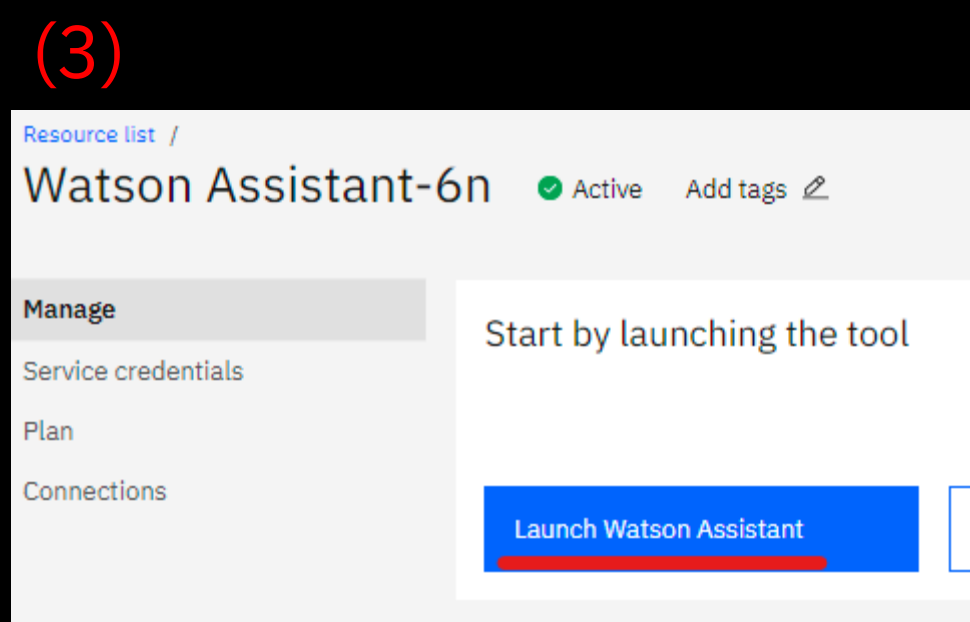
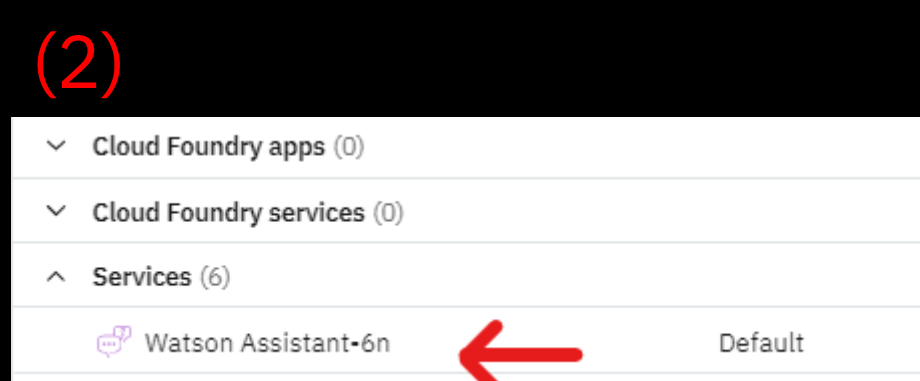
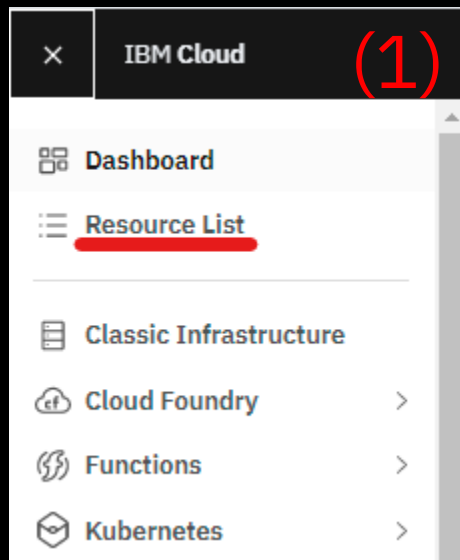
Create

Add to estimate

[View terms](#)

Hands-On Lab #2 Watson Assistant







My first skill



[Save new version](#)

[Try it](#)



Intents

Entities

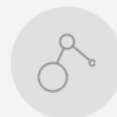
Dialog

Options

Analytics

Versions

Content Catalog




What is an intent?

An intent is a collection of user statements that have the same meaning. By creating intents, you train your assistant to understand the variety of ways users express a goal. [Learn more](#)

You will find some pre-made intents in the content catalog. [Browse content catalog](#)

Create intent +

[Upload intents](#)



Hands-On Lab #3 Bases del diálogo

Intent name
Reunion
Name your intent to match a customer's question or goal
Description (optional)
Cuando el usuario quiere agendar una reunion
User example
<input type="text" value="Type a user example here"/>
Add unique examples of what the user might say. (Pro tip: Add at least

- User examples (5) ↑**
- Estoy busacndo contactarme con alguien directamente
 - Me gustaria reunirme con alguien
 - Quiero agendar una reunion
 - Se puede agendar una cita?
 - Tienen alguna forma de hablar en persona

Intent name
Ubicacion
Name your intent to match a customer's question or goal
Description (optional)
Cuando el usuario quiere información sobre ubicaciones de universidades en el país
User example
<input type="text" value="Type a user example here"/>
Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help

- User examples (5) ↑**
- Donde estan ubicados?
 - Donde puedo ir a estudiar
 - En que lugares tienen universidades?
 - Que lugares tienen en el país?
 - Quiero ubicaciones

Intenciones

Entity name

@zonas

Name your entity to match the category of values that it will detect.

Value

Type a value

Synonyms

Synonyms ▼

Type a synonym

+

Add value

Recommend synonyms

Entidades

Values (3) ↑	Type	
ITR_Centro-Sur	Synonyms	durazno, flores, florida
ITR_Norte	Synonyms	artigas, rivera, salto, cerro largo, tacuarembó
ITR_Suroeste	Synonyms	paysandu, rio negro, soriano, colonia, san jose, nueva helvecia, la paz, mercedes

Hands-On Lab #4 Diálogo



Saludo

Customize

Node name will be shown to customers for disambiguation so use something descriptive.

Settings

If assistant recognizes

#General_Greetings +

Assistant responds

Text

¡Hola! ¿Cómo estás? Soy el asistente virtual de UTEC. ¿En qué puedo ayudarte?

¡Te saludo desde UTEC! Soy un asistente virtual dispuesto a contestar tus consultas.

Enter response variation

Response variations are set to **sequential**. Set to [random](#) | [multiline](#)

[Learn more](#)

Add node

Add child node

Add folder

Bienvenido
welcome
1 Responses / 0 Context Set / Does not return

Saludo
#General_Greetings
1 Responses / 0 Context Set / Does not return

Ubicacion
#Ubicacion
4 Dialog nodes / Does not return

ITR_Suroeste
@zonas:ITR_Suroeste
1 Responses / 0 Context Set / Return allowed

ITR_Centro-Sur
@zonas:ITR_Centro-Sur
1 Responses / 0 Context Set / Return allowed

ITR_Norte
@zonas:ITR_Norte
1 Responses / 0 Context Set / Return allowed

Especificar lugar
anything_else
1 Responses / 0 Context Set / Return allowed

Santiago Souto / February 23, 2021 / © 2021 IBM Corporation



Hands-On

Lab #5

Slots, Webhooks,
Multiple
Response

Reunion
Customize

Node name will be shown to customers for disambiguation so use something descriptive.

Settings

If assistant recognizes (1)

#Reunion
+

Then check for

Manage handlers

	Check for	Save it as	If not present, ask	Type		
1	@ci.literal	\$ci	¿Me podrías e	Required	⚙️	🗑️
2	@email.litera	\$email	¿Un mail de c	Required	⚙️	🗑️
3	@phone.liter	\$phone	¿Un celular de	Required	⚙️	🗑️

(3)

Customize "Reunion"
(2)

Customize node
Digressions

Slots ⓘ

Enable this to gather the information your bot needs to respond to a user within a single node.

☐ Prompt for everything

Enable this to ask for multiple pieces of information in a single prompt, so your user can provide them all at once and not be prompted for them one at a time.

Multiple conditioned responses ⓘ

Enable multiple responses so that your bot can provide different responses to the same input, based on other conditions.

Call to webhooks / external APIs

Cancel
Apply

☐ Values (1) ↑ Type

☐ cedula Patterns \d{7}-\d{1}, \d{1}}.\d{3}}.\d{3}}-\d{1}}

☐ Values (1) ↑ Type

☐ email Patterns \b[A-Za-z0-9._%+~]*@[([A-Za-z0-9~]+\.)+[A-Za-z]{2,}\b

☐ Values (1) ↑ Type

☐ celular Patterns \d{9}}, \d{3}} \d{3}} \d{3}}

Intents

Entities

Dialog

Options

Webhooks

Disambiguation

Analytics

Versions

Content Catalog

Webhooks

A webhook is a mechanism that allows you to call out to an external program based on events in your dialog.

Webhook setup

Specify the request URL for an external API you want to be able to invoke from dialog nodes. Watson will call this URL when configured to do so from a dialog node. [Learn more](#)

URL

https://us-south.functions.appdomain.cloud/api/v1/web/ssouto%40ibm.cc

Headers

Add HTTP headers for authorization or any other parameters required for invoking the webhook.

Then callout to my webhook [Learn more](#)

Parameters

Key	Value
ci	"\$ci"
email	"\$email"
phone	"\$phone"

Add parameter +

Customize "Reunion"

Callout to webhooks/ actions skill

On

Enable this to use an external source to populate a response. You can only call one external source per node.

☐ Call an action skill

This will call a specific action that is linked to the same Assistant as this dialog skill. This dialog skill will pause until the invoked action completes which could be still in the same dialog turn or take multiple turns to complete. [Learn more](#)

☒ Call a webhook

Enable this setting to send a POST request from this dialog node to the webhook URL. The URL and headers are defined in the Webhooks settings of the Options tab. After you enable this setting, the Multiple conditional responses setting is enabled automatically to support adding a response to show when the request is successful and another response to show if the request fails. [Learn more](#)

Webhook URL Your webhook URL is configured.

Options




Cancel

Apply





(4) Assistant responses

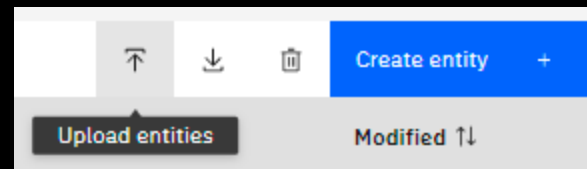
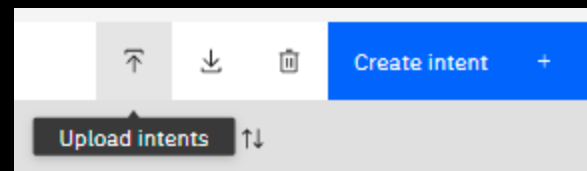
	If assistant recognizes	Respond with		
1	<div>\$webhook_result_1.ok == true</div>	<div>¡Datos guardados!</div>	<div>⚙️</div>	<div>🗑️</div>
2	<div>anything_else</div>	<div>Ocurrió un error</div>	<div>⚙️</div>	<div>🗑️</div>

Then set context

Variable	Value	
ci	null	
email	null	
phone	null	

e equipo > Escritorio > watsonAssistantUTEC-main

Nombre	Fecha de modificación	Tipo
 Entity_Import.csv	22/2/2021 19:36	Archivo de valores
 Intent_Import.csv	22/2/2021 19:36	Archivo de valores
 Script-HandsOnLab.pdf	22/2/2021 19:36	Adobe Acrobat
 Watson Assistant Hands-On Lab - UTEC.pdf	22/2/2021 19:36	Adobe Acrobat



Customize "Carreras"



Enable this to gather the information your bot needs to respond to a user within a single node.

☐ Prompt for everything

Enable this to ask for multiple pieces of information in a single prompt, so your user can provide them all at once and not be prompted for them one at a time.

Multiple conditioned responses ⓘ



Enable multiple responses so that your bot can provide different responses to the same input, based on other conditions.

Callout to webhooks/ actions skill



Enable this to use an external source to populate a response. You can only call one external source per node.

Cancel

Apply

Carreras

Customize ⚙️

Node name will be shown to customers for disambiguation so use something descriptive.

Settings

If assistant recognizes

#Info_Carreras



Assistant responds

If assistant recognizes

Respond with

1

@carreras:(maestria profesioni

Puedes obtener más informaci



2

@carreras:(ingenieria en meca

Puedes obtener más informaci



3

@carreras:(tecnologo en jazz y

Puedes obtener más informaci



4

anything_else

Puedes obtener más informaci



Hands-On

Lab #6

Digressions & Disambiguation



Customize "Reunion"

Customize node

Digressions

Default digressions settings apply to this node ⓘ

Digressions cannot go **away from** this node ⓘ

Digressions can come **into** this node ⓘ

Customize "Reunion"

Customize node

Digressions

This node has **edited** digressions settings ⓘ

Digressions can go **away from** this node ⓘ



Allow digressions away while slot filling

☒ On

Users can divert the conversation away from this node in the middle of processing slots.

☒ Only digress from slots to nodes that allow returns

If a user goes off topic, only nodes with digressions that allow returns will be considered.

Digressions can come **into** this node ⓘ

Cancel

Apply

Customize "Ubicacion" ✕

Digressions

Default digressions settings apply to this folder ⓘ

Digressions can come into this folder ⓘ ▼


CancelApply

Customize "Ubicacion" ✕

Digressions

This folder has **edited** digressions settings ⓘ

Digressions can come into this folder ⓘ ^



Allow digressions into this node On

Users can digress to this node from other dialog flows.

☒ Return after digressions

After this dialog flow is processed, return to the dialog flow that was previously in progress.

CancelApply

Intents

Entities

Dialog

Options

Webhooks

Disambiguation

Analytics

Versions

Content Catalog

Disambiguation

If your skill is confident that more than one dialog node can address a customer's query, disambiguation allows the assistant to ask the customer for clarification. A description of the purpose of each dialog node is displayed as a list of options, and the customer is asked to pick the right one. [Learn more](#)



On

Disambiguation message

Querías decir:

The message your skill will send to the customer before a list of possible options.

Anything else

Ninguna de las anteriores

An option customers can pick if none of the suggested nodes are appropriate

Maximum number of suggestions

5

Set a limit for how many suggestions to display at once

quiero agendar una reunion para saber sobre las carreras disponibles

#Info_Carreras

Querías decir:

- Carreras Details...
- Reunion Details...
- Ninguna de las anteriores Details...

quiero agendar una reunion para saber sobre las carreras disponibles

#Info_Carreras

#Info_Carreras

#Reunion

#General_Agent_Capabilities

0.77

0.59

0.29

¿Objetivos cumplidos?

- ☐ ¿Qué es un chatbot?
- ☐ ¿Cómo crear un chatbot con Watson Assistant?
- ☐ ¿Puedo diferenciar intenciones y entidades?
- ☐ ¿Cómo funcionan los slots, digressions y disambiguation?
- ☐ ¿Puedo moverme cómodo en el árbol de diálogo?

Links interesantes y cursos:

- <https://cloud.ibm.com/docs/assistant?topic=assistant-getting-started>
- <https://www.ibm.com/cloud/watson-assistant>
- <https://www.ibm.com/blogs/watson/2020/12/innovations-in-natural-language-processing-from-ibm-to-help-enterprises-better-understand-the-language-of-their-business/>
- <https://developer.ibm.com/articles/introduction-watson-assistant/>
- <https://www.ibm.com/watson/how-to-build-a-chatbot>
- <https://www.coursera.org/learn/building-ai-powered-chatbots?action=enroll&authType=google>
- <https://es.coursera.org/projects/building-smart-business-assistants-ibm-watson>
- <https://developer.ibm.com/tutorials/build-an-enterprise-connected-virtual-assistant-with-no-code/>

¿Quieres certificarte?



Existen más cursos para certificarse en:

<https://www.ibm.com/training/Y835927A61405V35>

<https://cognitiveclass.ai/badges/build-your-own-chatbot>



PREGUNTAS

¡Muchas gracias!

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ibm.com

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