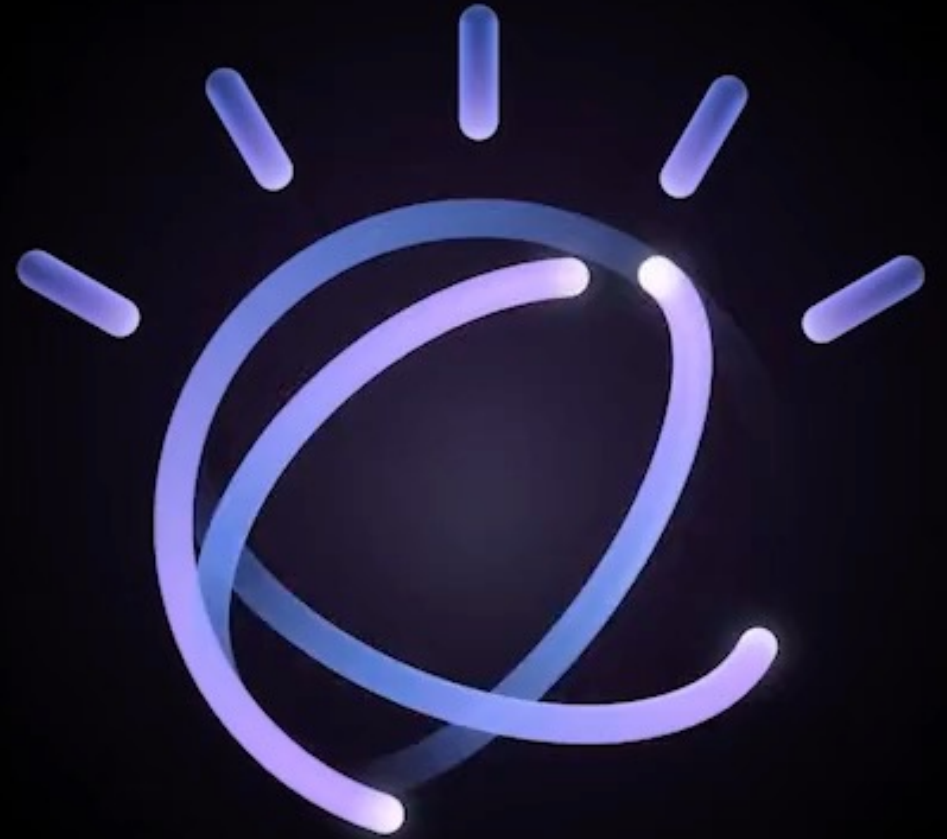


Introduction to IBM Watson Assistant

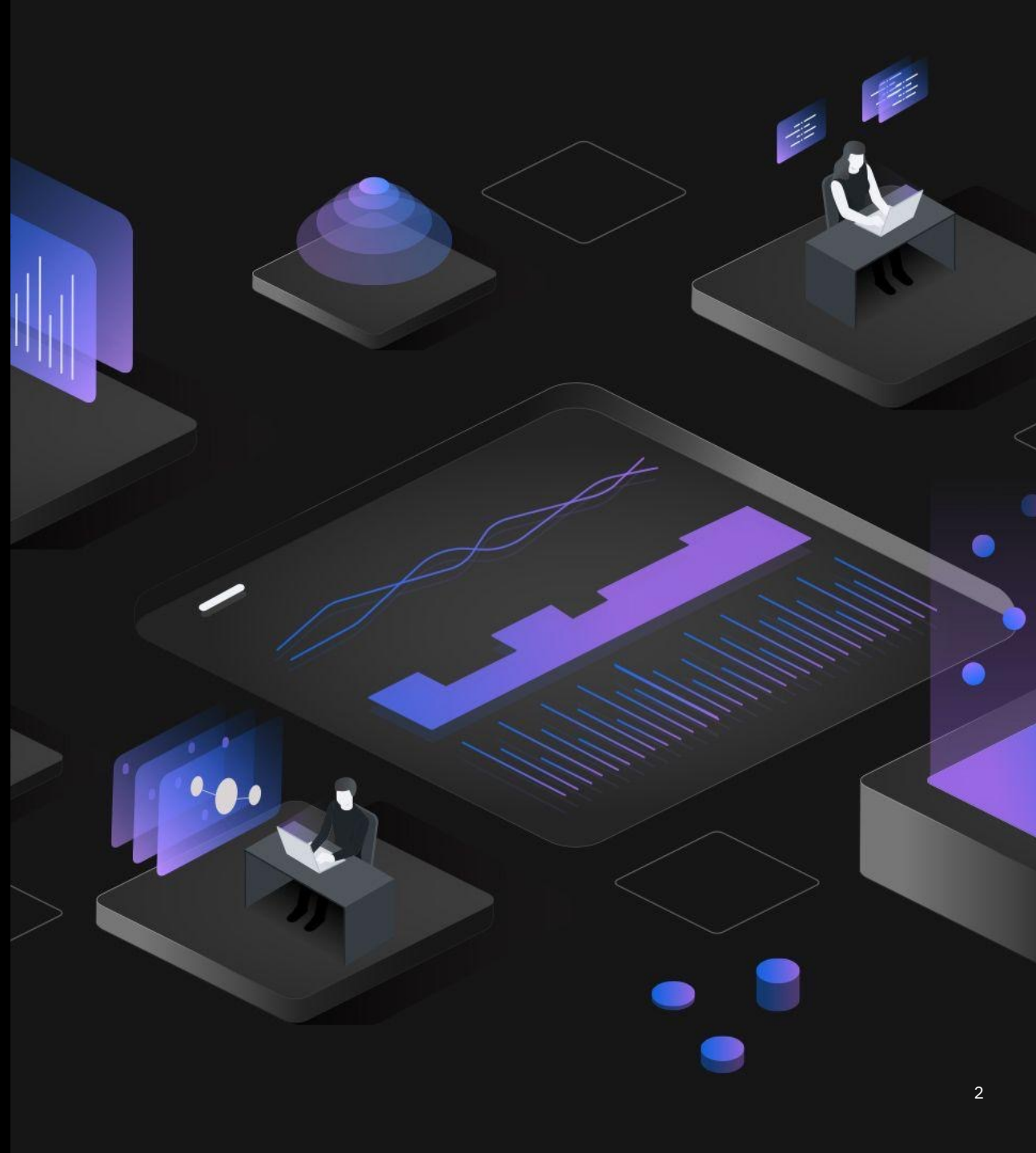
Essential Concepts and Features



Learning Objectives

- Describe Watson Assistant
- Identify common Watson Assistant use cases
- Define key terms associated with using Watson Assistant: intents, entities, dialog nodes, and skills

Prepare you for AI
Essentials Framework
assignment



Key Terms

Watson Assistant

Intents

Entities

Dialog

Skills

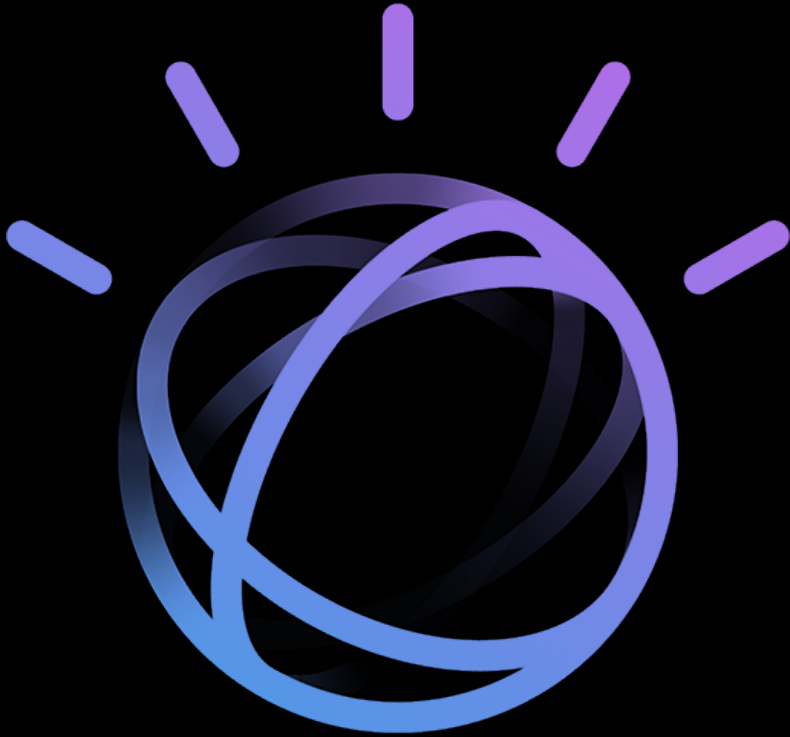


IBM Watson Assistant

An enterprise artificial intelligence (AI) Agent

Helps businesses enhance customer and employee experiences by delivering proactive and personalized conversational services

Why not a chatbot?



- Learns from data to perform some useful tasks (machine learning)
- Does more than just chat!

Watson Assistant

Two Key Use Cases

Customer Care

Respond to customers by avoiding 'wait' queues, make self service available 24/7 while providing a consistent brand experience to your customers.

Agent Assist

Through Watson Assistant, IBM can decrease call center and other agent-assist operation costs through self service and deflection of incoming queries.

Skills

The AI-powered
functions Assistant
uses to do things
for users

Watson Assistant:
“More than a chatbot”

The Dialog Skill

IBM Watson Assistant Lite [Upgrade](#)



My first skill

Dialogue Skill!



Intents

Add node

Add child node

Add folder

Entities



Dialog



Options



Analytics



Versions

Content Catalog

Welcome



welcome

1 Responses / 0 Context Set / Does not return

Anything else



anything_else

1 Responses / 0 Context Set / Does not return

~~Watson Assistant~~

Intents

Entities

Dialog

Skills

What would it take for Watson to learn to do things for customers and employees?

Intents

A category that defines a user's goal or purpose

Intents help Assistant to choose the proper dialog flow to help users accomplish their goals

Adding Intents

Amsel Fit: New York-based health and wellness brand selling apparel and nutritional products

holiday_hours

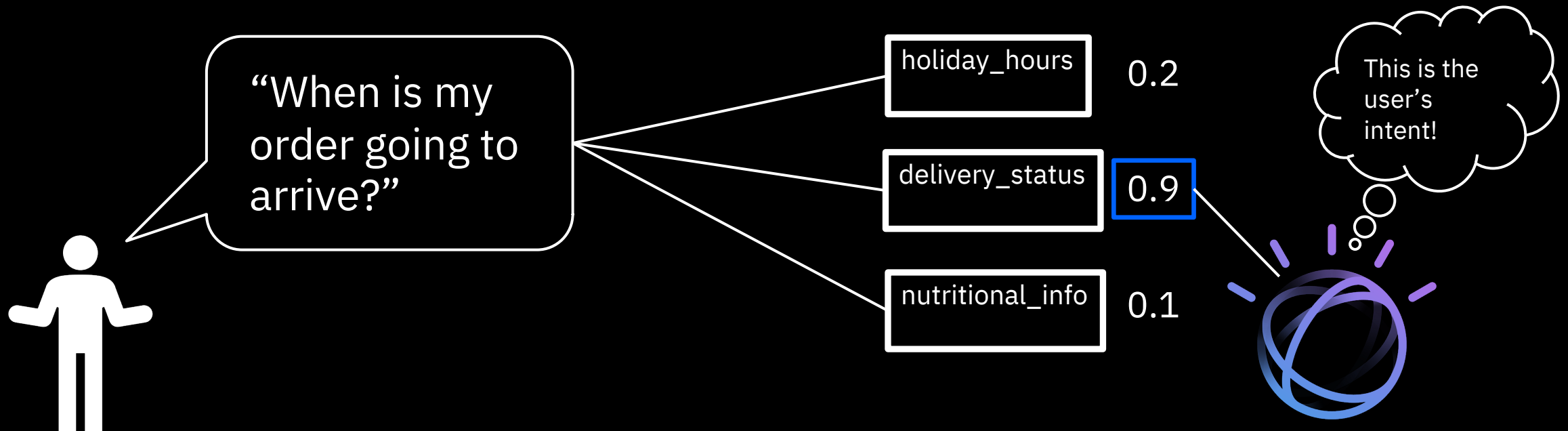
- “What are your holiday hours?”
- “What is your opening hours around the holidays?”
- “Are you open on Christmas day?”

delivery_status

- “Where is my package?”
- “When will my package be delivered?”
- “Check delivery status”

nutritional_info

- “How many calories are in your protein bars?”
- “How much sugar is in the energy drink?”



Intents Interface

#delivery_status

Last updated: a few seconds ago

Try it

Intent name

#delivery_status

Name your intent to match a customer's question or goal

Description (optional)

Add a description to this intent

User example

Type a user example here

Add unique examples of what the user might say. (Pro tip: Add at least 5 unique examples to help Watson understand)

Add example

User examples (3) ↑

Check delivery status

When will my stuff be delivered?

Where is my package?

Added ↑↓

a few seconds ago

a few seconds ago

a few seconds ago

Annotate entities

[What's this?](#)

Entities

The terms and
objects that put
intent in context

Intents are the “verbs” of what
the user wants to do. Entities are
the “nouns.”

Entity Examples: Amsel Fit

check_in_stock

Associated entities:

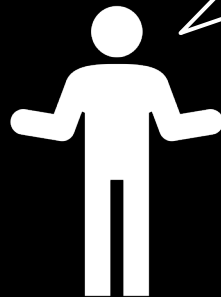
product_type
product_name
location

Categories of values that
Watson will seek entries in

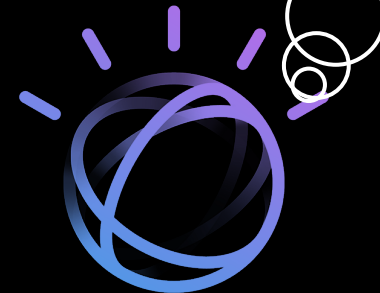
check_in_stock

0.9

“Are there
jogging pants in
stock near me?”



User wants to
check in stock
for specific
product_type at
their location



Entity Detection: Two Approaches

Dictionary based

Watson looks for specific terms, synonyms, and patterns associated with certain entities

Synonyms

- Manhattan; NYC, NY, New York

Pattern

- Email; text@text.com

System

- Provided by Watson; numbers, dates, times

Context-based

Watson calculates the probability that a given term or mention is part of a certain entity, based on its context

Machine Learning-powered

- Trains on large textual datasets pertinent to the specific business problem

Entities Interface

← | @location

Last updated: a few seconds ago [Try it](#)

Entity name

@location

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

Dictionary (1) Annotation (0)

<input type="checkbox"/>	Values (1) ↑	Type
<input type="checkbox"/>	<div>Manhattan</div>	<div><div>Synonyms ▾ </div><div>NYC</div><div>–</div><div>New York City</div><div>–</div><div>Type a synonym</div><div>+</div></div>

Fuzzy matching ⓘ
 On

“Nwe York” -> “New York”

~~Watson Assistant~~

~~Intents~~

~~Entities~~

Dialog
Skills

How can Watson use intents and entities to formulate useful conversations with users?

Dialog

The conversation
procedure that
Watson follows to
respond to intents
and entities

A logic-based approach to
identifying the user's goals
(intents and entities) and
responding effectively

Dialog: The Tree-based Approach

IBM Watson Assistant Lite [Upgrade](#)



My first skill



Intents

Add node

Add child node

Add folder

Entities



Dialog



Options



Analytics



Versions

Content Catalog

Welcome

welcome

1 Responses / 0 Context Set / Does not return



Anything else

anything_else

1 Responses / 0 Context Set / Does not return



“Leaves” (Nodes)

“Branches”

Nodes



What does Assistant need to recognize?
(What condition needs to be met?)

How should Assistant need to respond? (What action should be taken?)

Welcome

The screenshot shows the Microsoft Bot Framework Designer interface for a node named "Welcome". The node name is at the top, with "Customize" and "Settings" links. Below the name is a note: "Node name will be shown to customers for disambiguation so use something descriptive." The main area is divided into two sections: "Trigger" and "Response". The "Trigger" section is titled "If assistant recognizes" and contains a list with the word "welcome" and a plus sign. The "Response" section is titled "Assistant responds" and contains a dropdown menu set to "Text", a text input field with the value "Hello. How can I help you?", and a text input field for "Enter response variation". At the bottom, it says "Response variations are set to sequential. Set to random | multiline" with a "Learn more" link.


Intents and Entities in Nodes

Intents and entities help define triggers!

holiday_hours


Holiday Hours


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


Customize 

Settings

If assistant recognizes

#holiday_hours 

and 


@christmas 

+

Intent (#)

Entity (@)

Assistant responds

Text 

We are open daily from 9 AM to 7 PM. We close at 3 PM on Christmas Eve. We are closed on Christmas Day and New Year's Day.

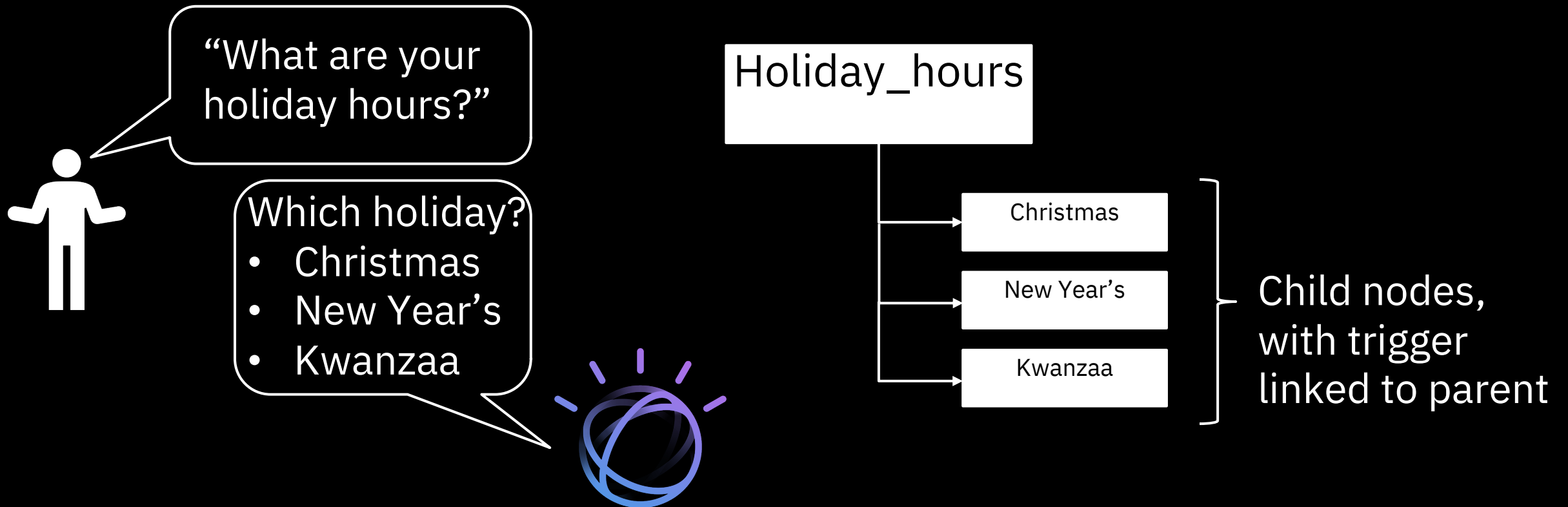
Our Holiday Hours: Close at 3 PM Christmas Eve. Closed Christmas Day and New Year's Day

Enter response variation

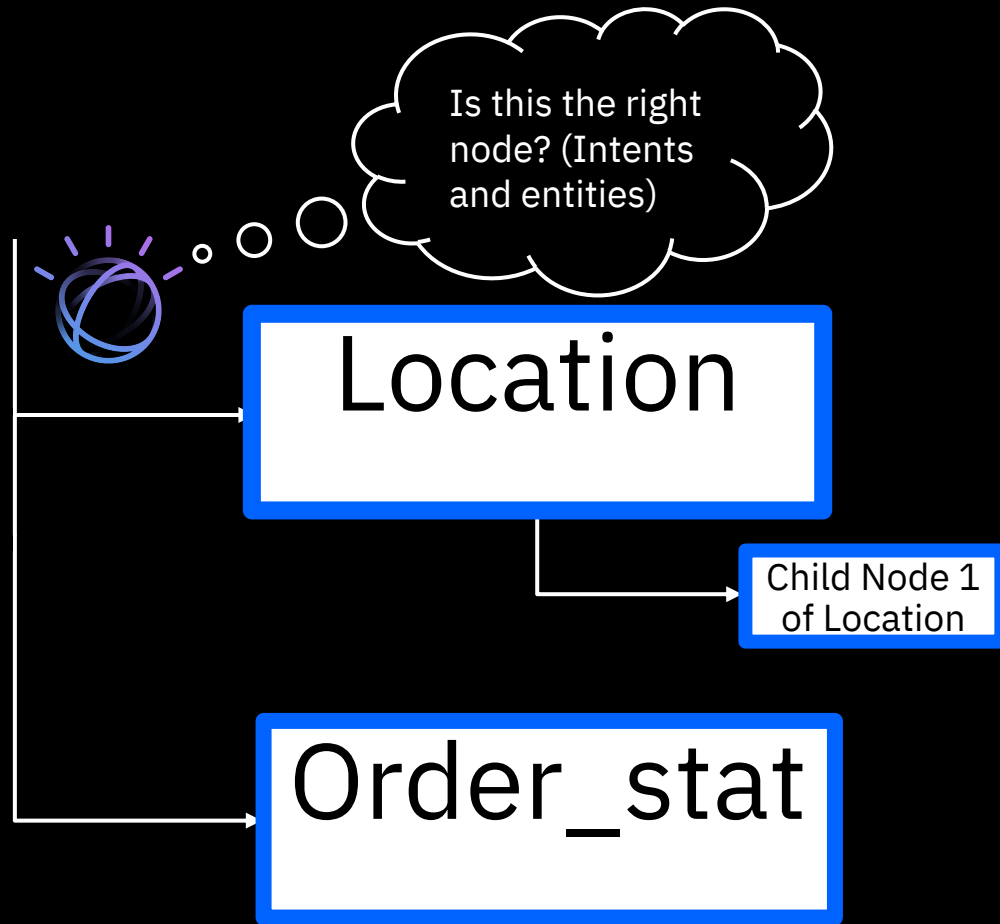
Response variations are set to **sequential**. Set to [random](#) | [multiline](#)

Child Nodes

A way to structure dialog when one response doesn't fulfill the user's goal



Branching



Watson executes dialog along the branches, sequentially
(Order matters!)



Recap

Watson Assistant Customer Care Expert Assist

Intents Entities

Dialog Search Actions

The screenshot displays the IBM Cloud Docs interface for Watson Assistant (Managed). The left sidebar contains a navigation menu with sections: 'About this product', 'Get started' (expanded), 'Tutorials', and 'How to'. The main content area is titled 'Getting started with Watson Assistant' and includes a 'Before you begin' section with three numbered steps: 1. Go to the Watson Assistant page in the IBM Cloud catalog. 2. Sign up for a free IBM Cloud account or log in. 3. Click Create. Below this is 'Step 1: Open Watson Assistant', which instructs the user to click 'Launch Watson Assistant' and provides information about the automatically created assistant named 'My first assistant'. The right sidebar features a search bar and a 'Console' link.

cloud.ibm.com/docs/assistant

Glossary

Assistant	AI agent for customer service and employee support
Integrations	Platforms where Watson Assistant can live
Intents	The goal or motivation that a user has
Content Catalogue	Easy way to add common intents
Entities	The “nouns” of users’ intents (e.g. the what and where)
Entity Detection	Dictionary or context-based recognition of entities
Dialog	Tree-based approach to formulate dialog via intents/entities
Nodes	“Leaves” of a dialog tree; consists of a trigger and a response
Branching	The path along dialog tree nodes; Order matters!
Digressions	Allow users to jump between nodes mid dialog
Search Skill	Watson Discovery integration for finding new info
Action Skill	Tool to easily build single conversation patterns