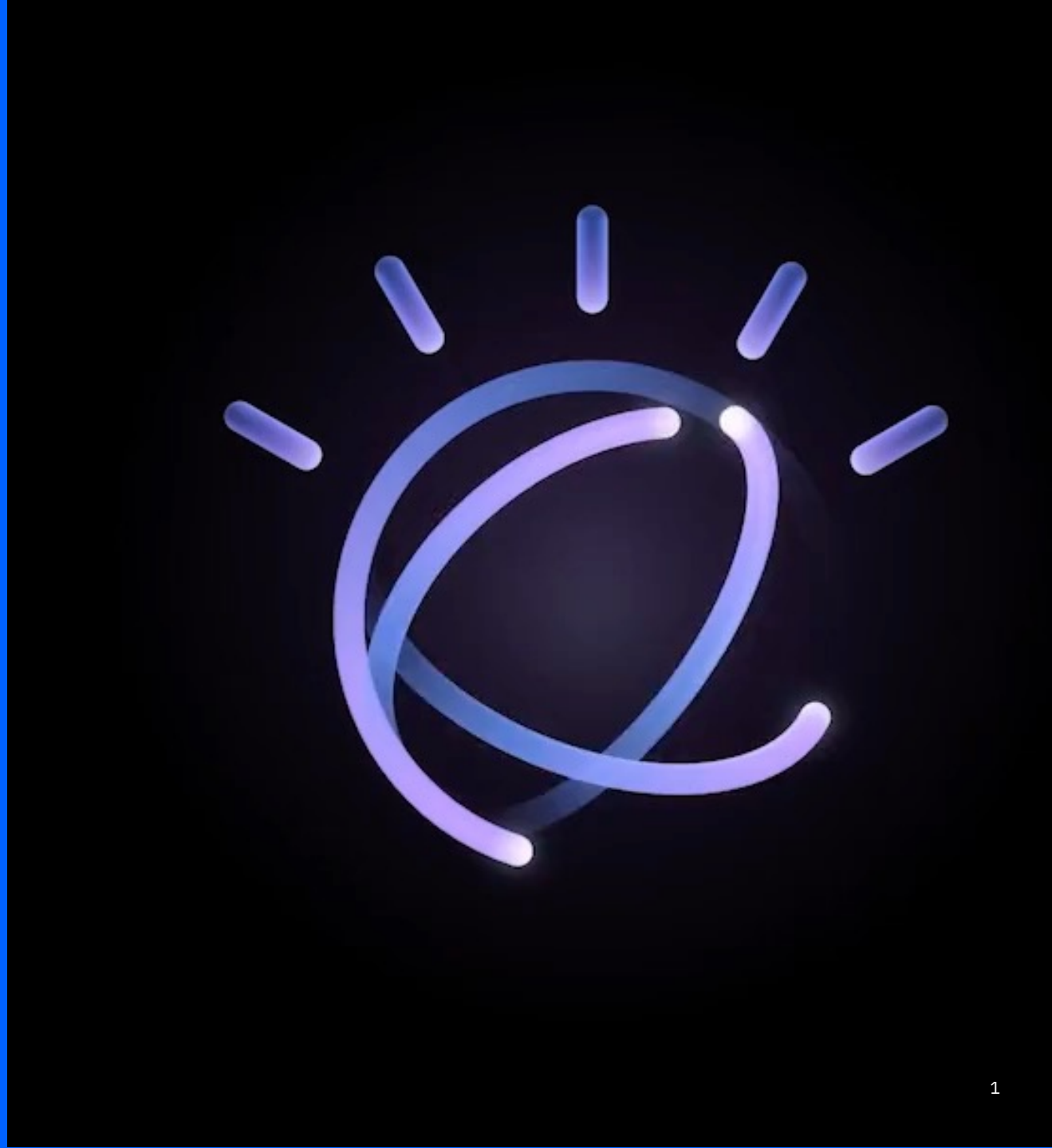
Introduction to IBM Watson Assistant

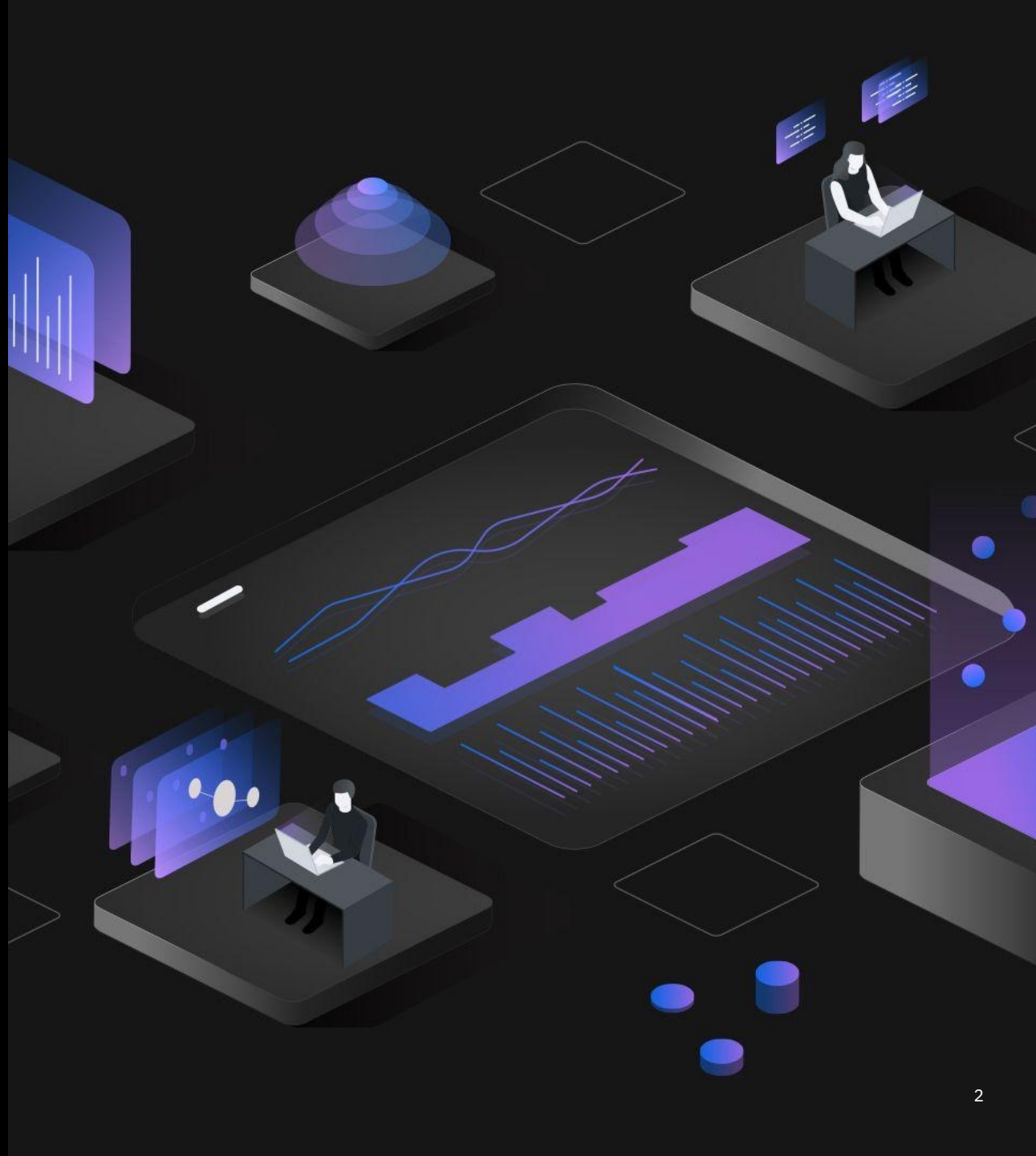
Essential Concepts and Features



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

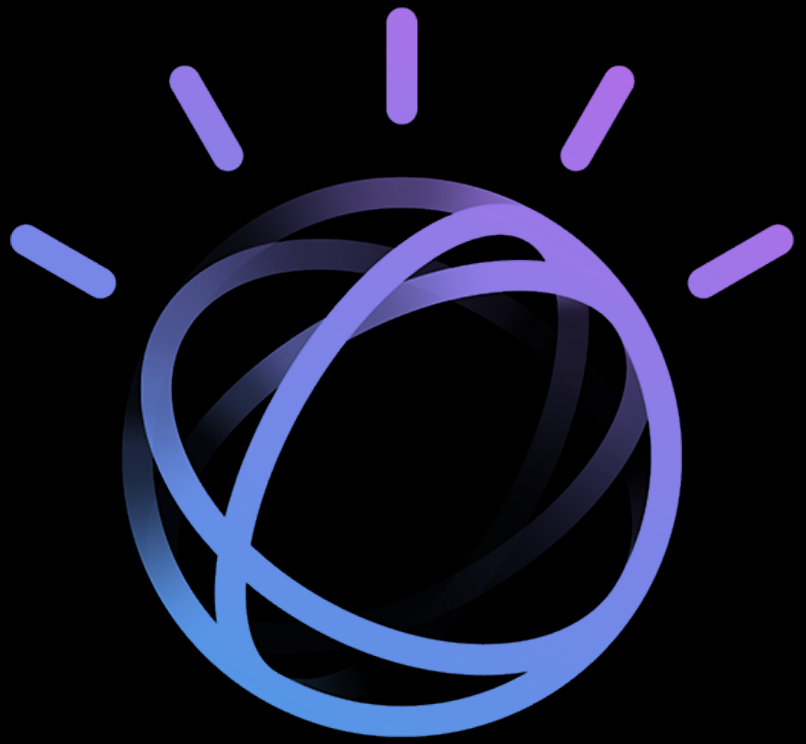
IBM Watson Assistant

An enterprise artificial intelligence (AI) Agent

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

AI Agent

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

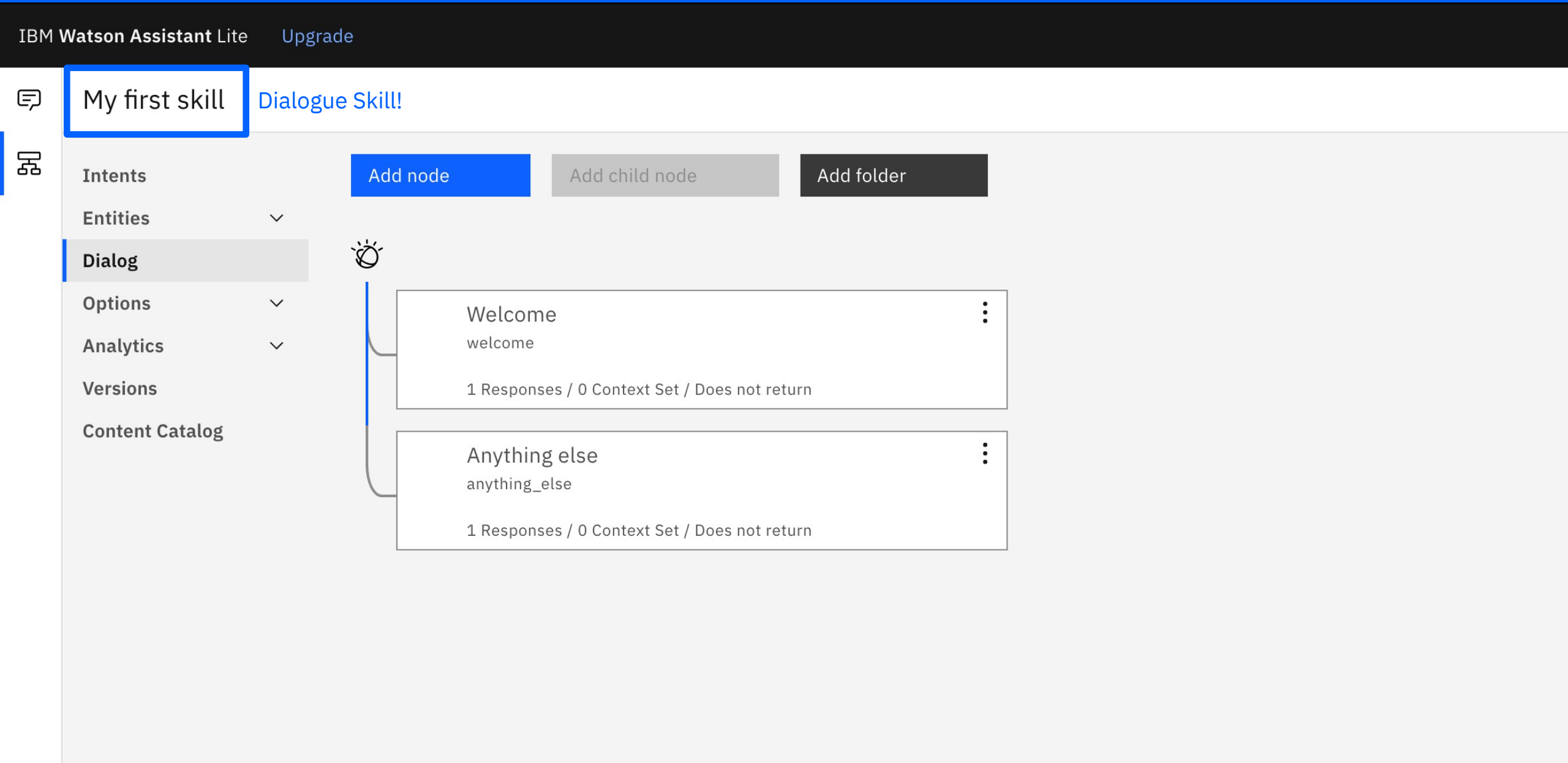
Through Watson Assistant, IBM can decrease call center and other agent-assist operation costs through self service and deflection of incoming queries.

Skills

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

Watson Assistant:
“More than a chatbot”

The Dialog Skill



~~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

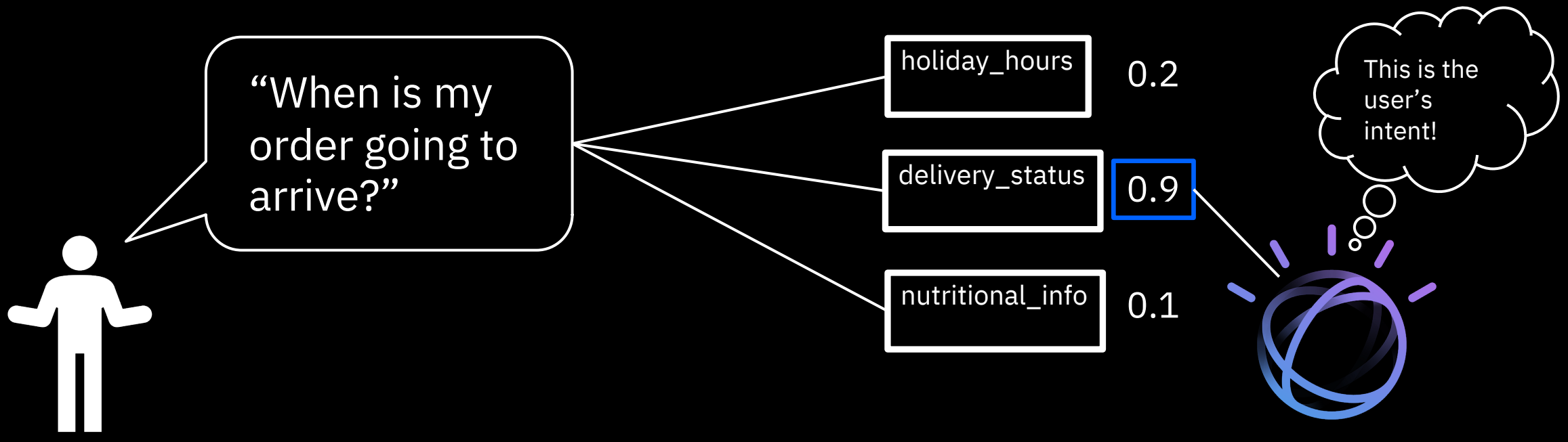
- “What are your holiday hours?”
- “What is your opening hours around the holidays?”
- “Are you open on Christmas day?”

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

Annotate entities What's this?

User examples (3)	Added
Check delivery status	a few seconds ago
When will my stuff be delivered?	a few seconds ago
Where is my package?	a few seconds ago

Entities

The terms and objects that put intents in context

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

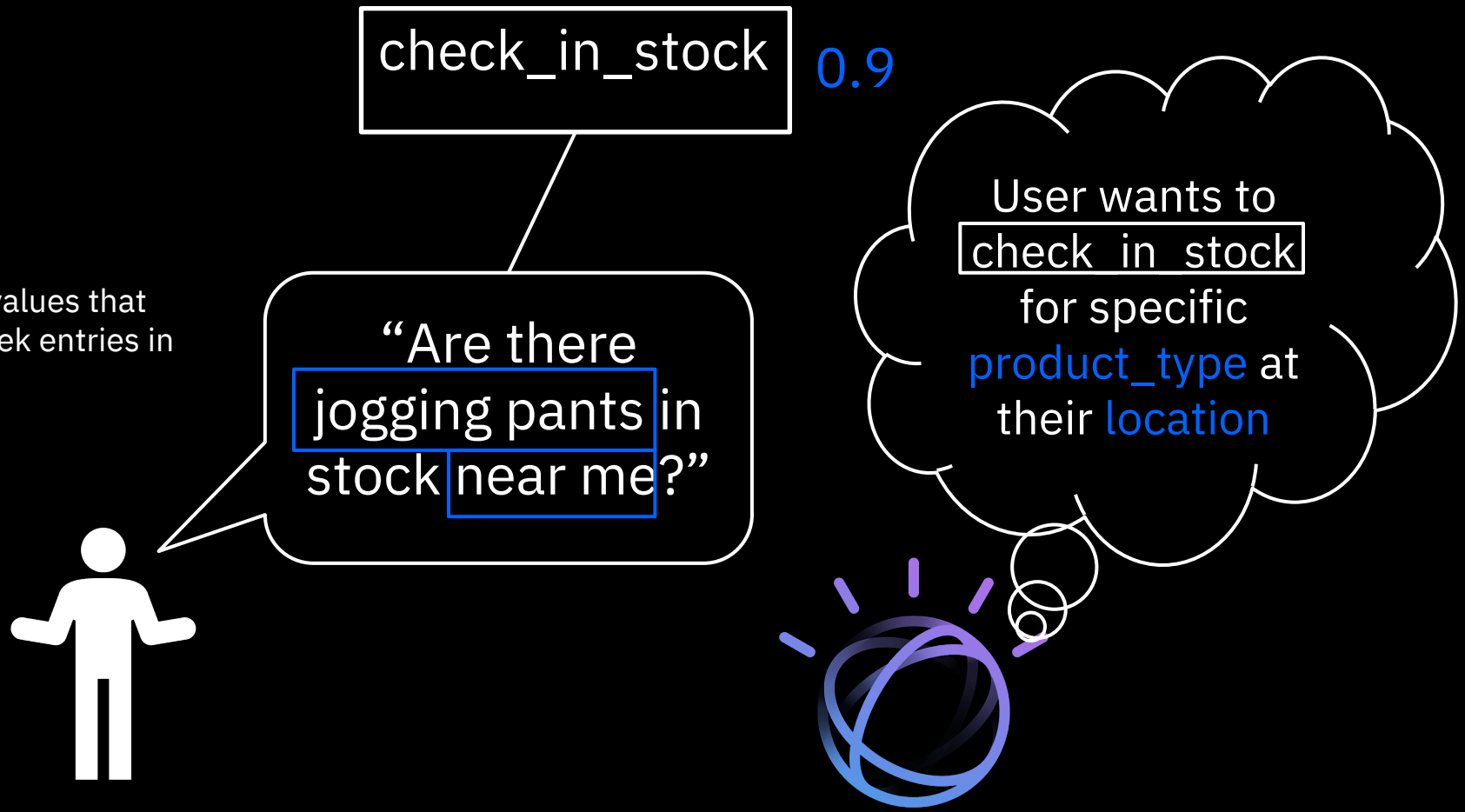
Entity Examples: Amsel Fit

check_in_stock

Associated entities:

product_type
product_name
location

Categories of values that Watson will seek entries in



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

IBM **Watson Assistant** Lite Upgrade

← | @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.

Fuzzy matching

On

"Nwe York" -> "New York"

Value

Type a value

Synonyms

Synonyms

Type a synonym +

Add value

Recommend synonyms

Dictionary (1) Annotation (0)

Values (1) ↑	Type
Manhattan	Synonyms: NYC – New York City –
	Type a synonym +

Showing 1–1 of 1 values

1 1 of 1 pages

~~Watson Assistant~~

~~Intents~~

~~Entities~~

Dialog Skills

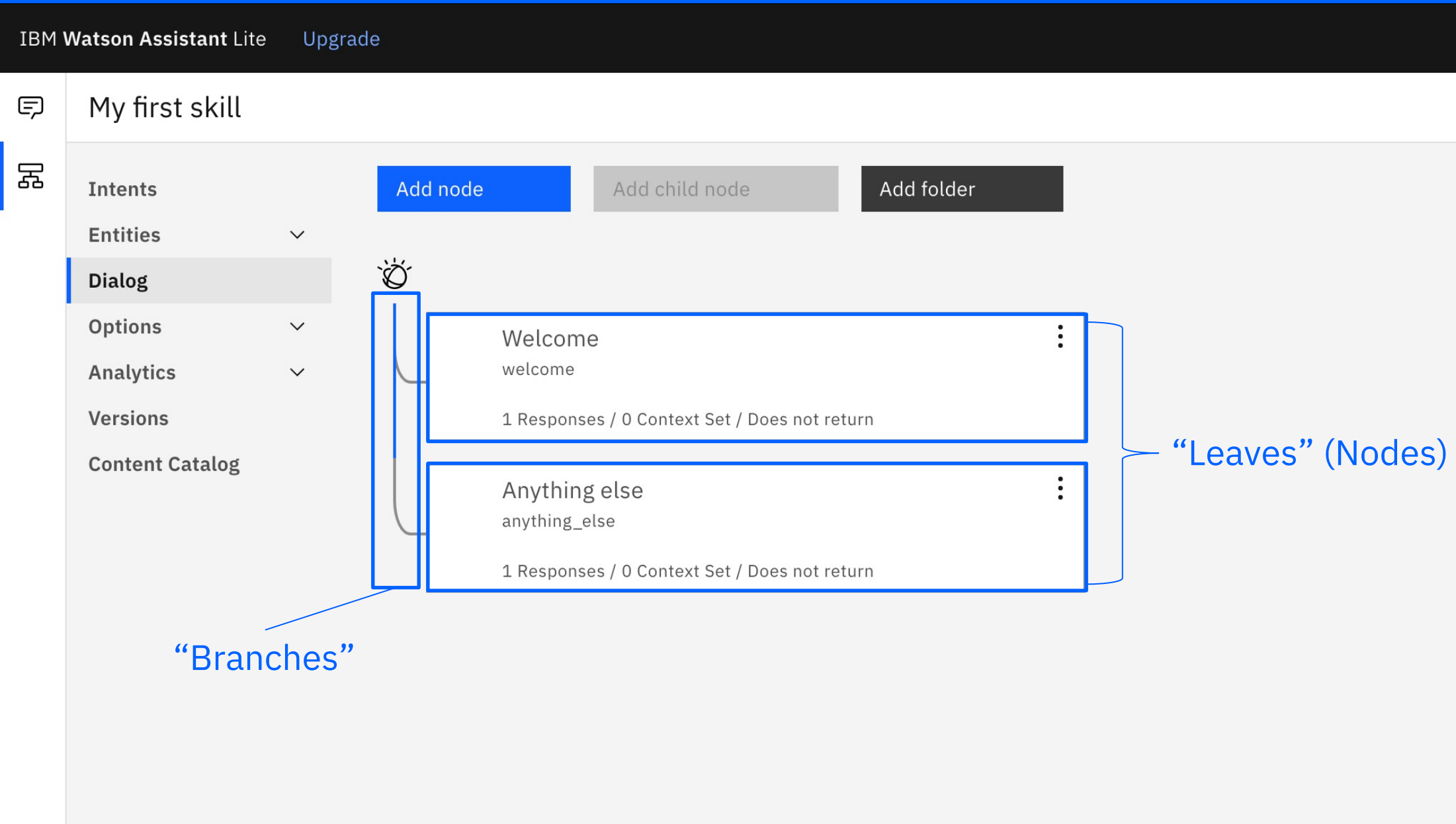
How can Watson use intents and entities to formulate useful conversations with users?

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

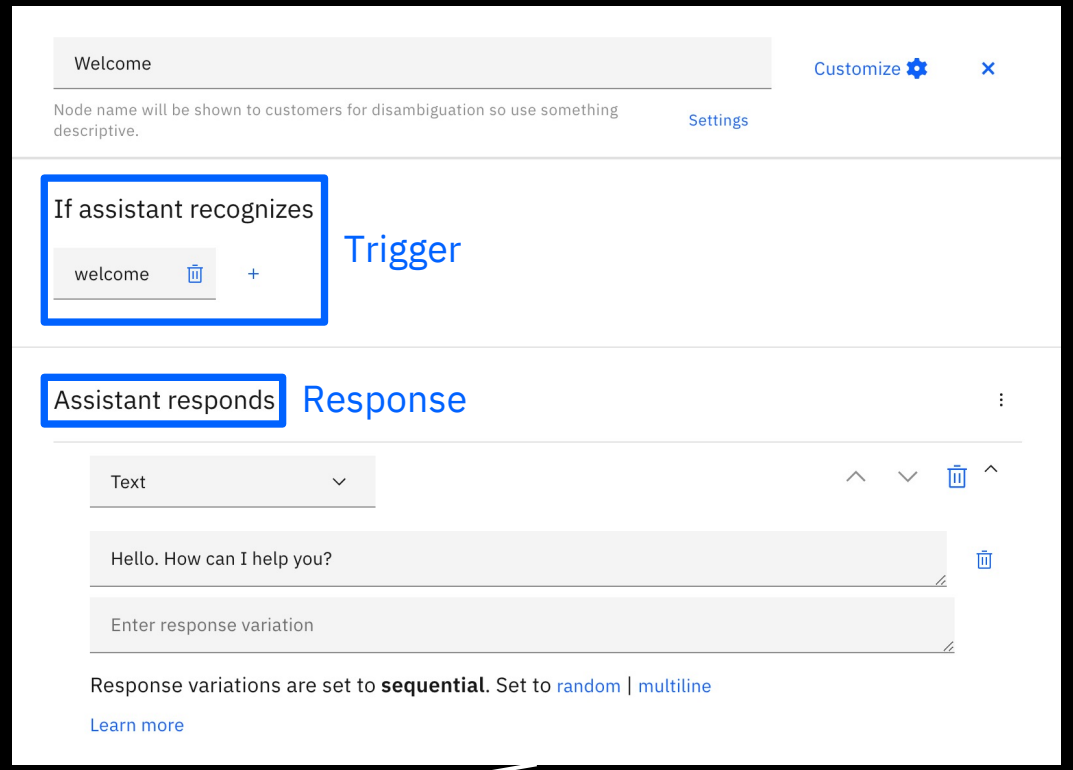


Nodes

Trigger → Response

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

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

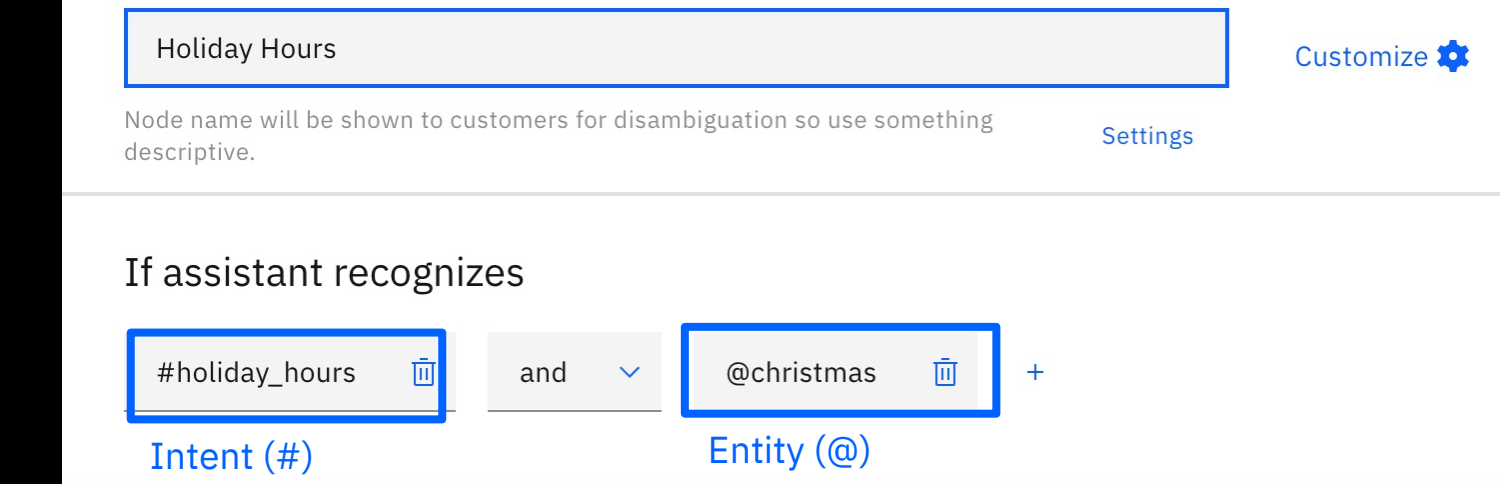


Welcome

Intents and Entities in Nodes

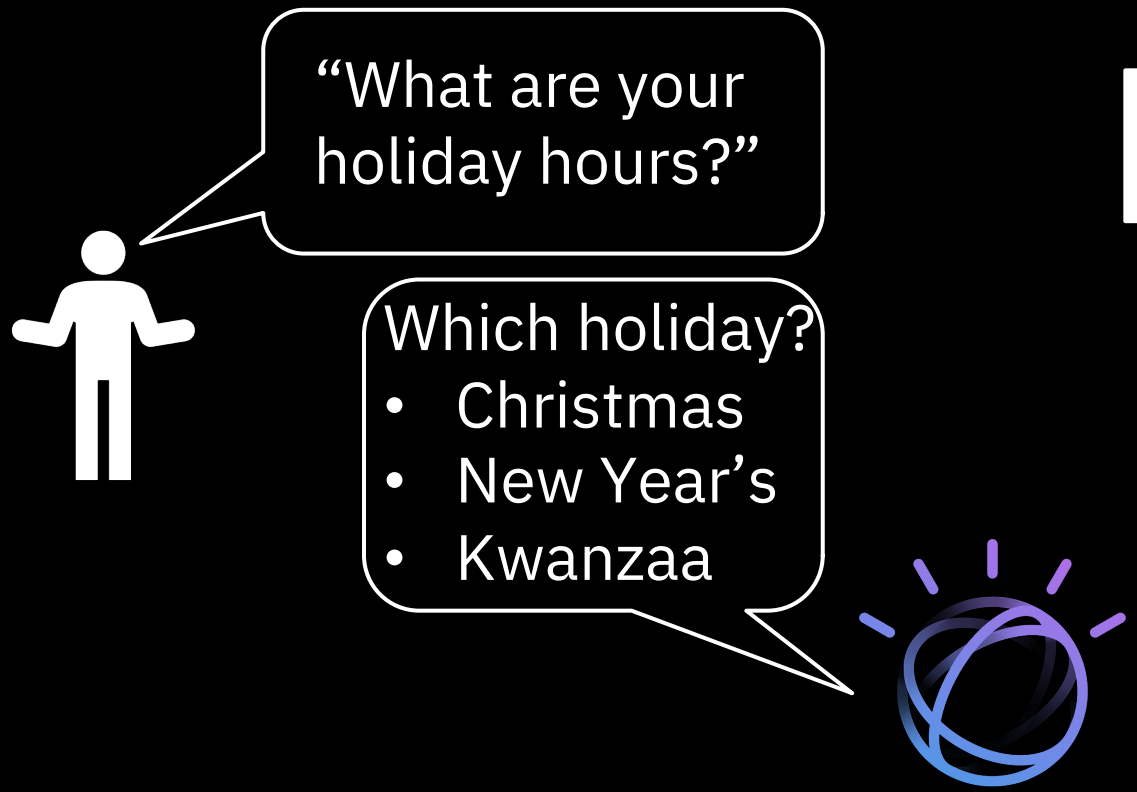
Intents and entities help define triggers!

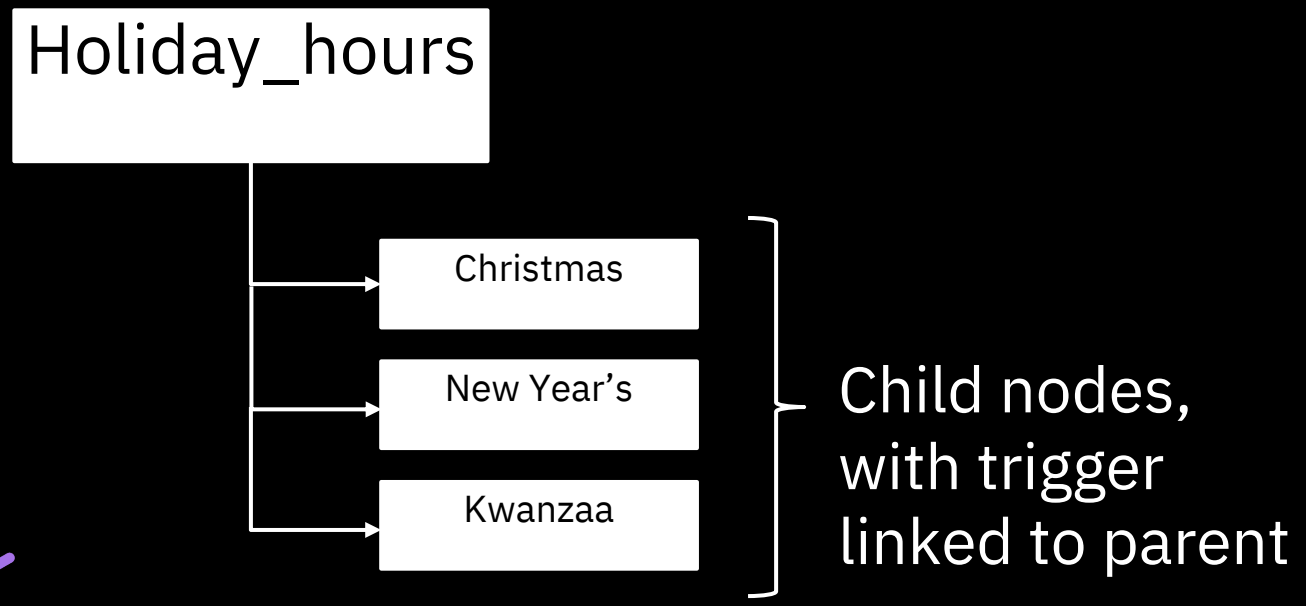
holiday_hours



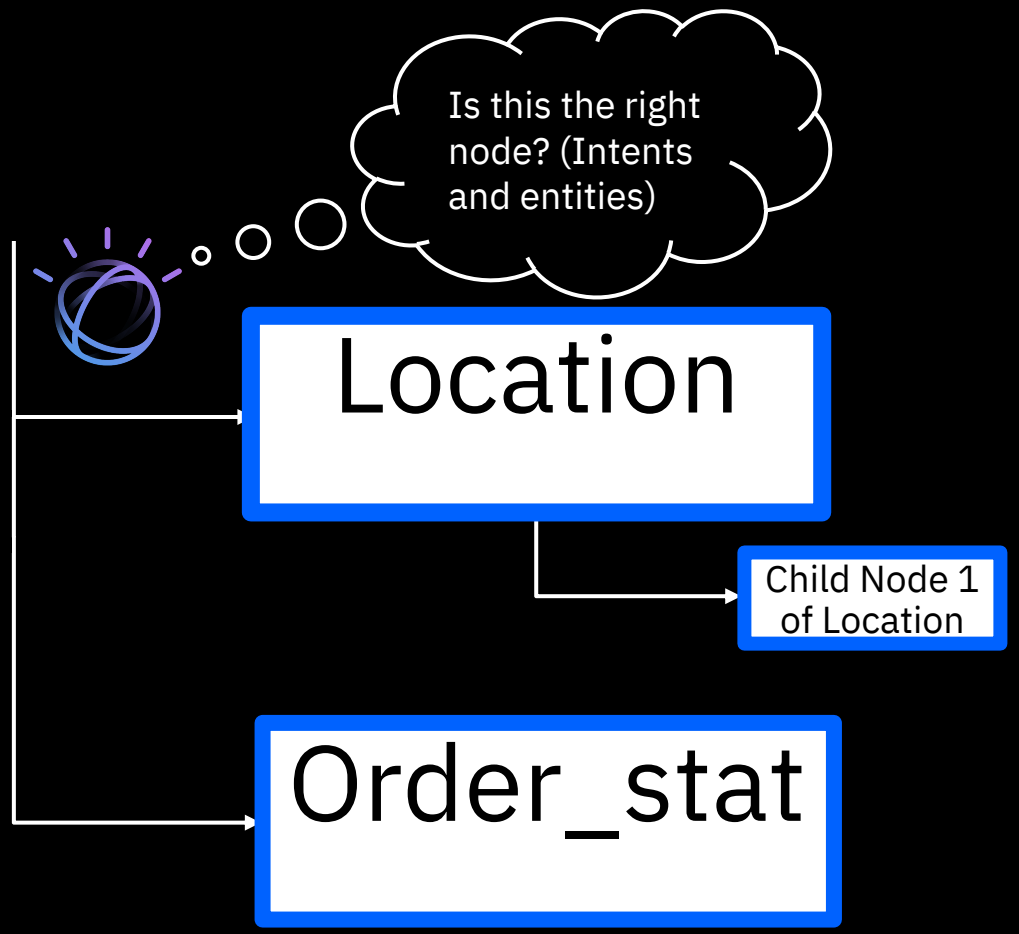
Child Nodes

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





Branching



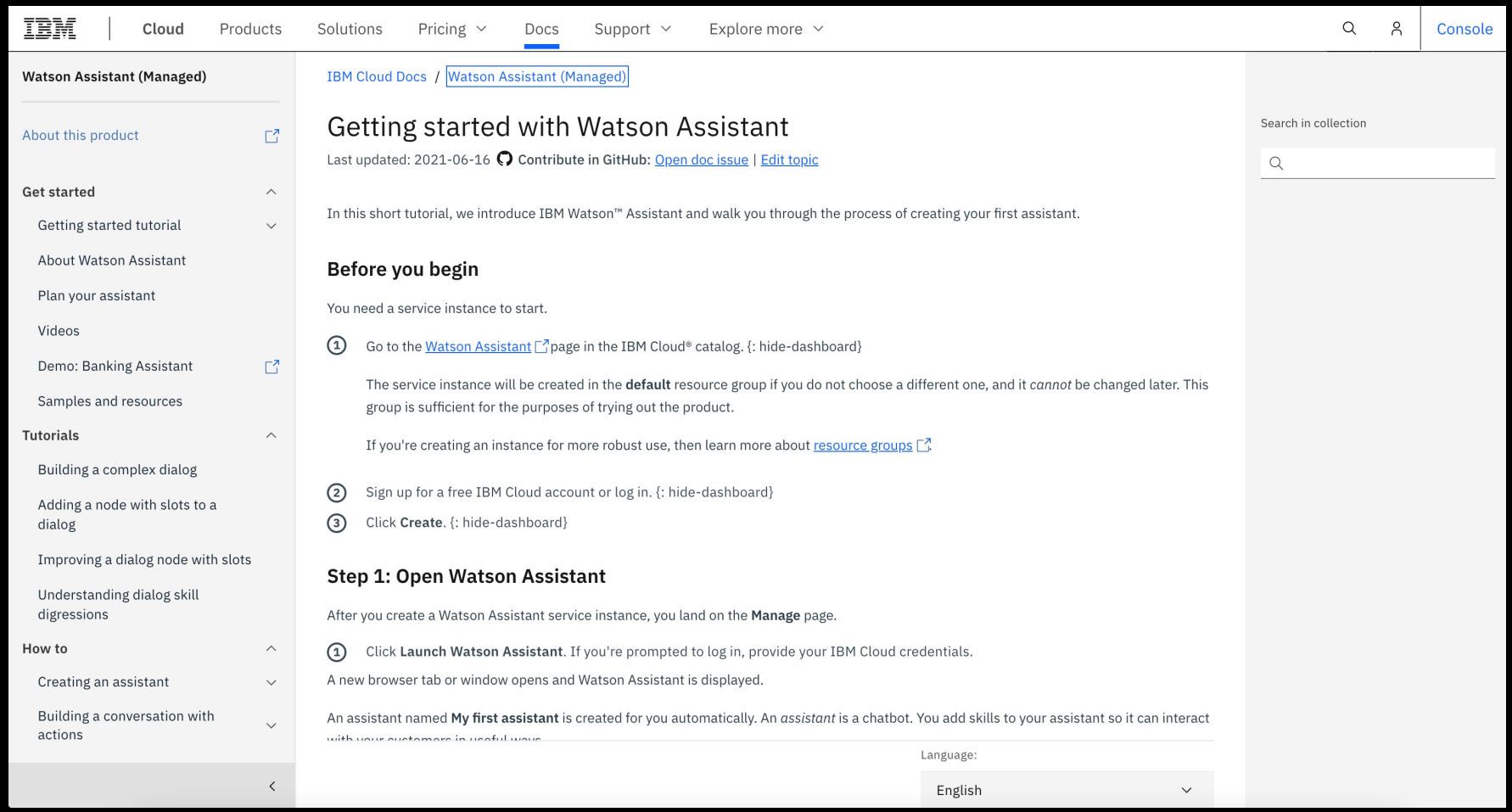
Watson executes dialog along the branches, sequentially (Order matters!)

Recap

Watson Assistant
Customer Care
Expert Assist

Intents
Entities

Dialog
Search
Actions



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