

# IBM Watson Assistant

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<http://bit.ly/ibm-blog-helper>

**IBM Developer**

# 10 TIPS TO MAKE YOUR BOT USABLE

{ UPKAR LIDDER - @LIDDERUPK }

LET'S CHAT !

<http://bit.ly/bot-tips>

- SET EXPECTATIONS •
- USE AI - NLP AND NLU •
- REMEMBER HISTORICAL CONTEXT •
- HANDLE OFF-TOPIC QUESTIONS •
- GIVE THE USER A WAY OUT •
- AWARD FOR COMING BACK •
- ASK FOR HELP •
- GARBAGE IN, ROSES OUT •
- USE THE BASE PLATFORM •
- INVOLVE HUMANS AT RIGHT TIME •

# Skill vs Assistant

## Skills

Skills contain the training to respond to your customer queries.  
Add skills to your assistant and then deploy to your channels.

Create skill

blogbot

TYPE: Dialog — English (US)

CREATED:  
Aug 6, 2019 9:41 AM PDT

UPDATED:  
Aug 12, 2019 7:10 PM PDT

LINKED ASSISTANTS (1): blogbot

My first skill

TYPE: Dialog — English (US)

CREATED:  
Aug 3, 2019 12:35 PM PDT

UPDATED:  
Aug 3, 2019 1:46 PM PDT

LINKED ASSISTANTS (2): My first assistant, virtualagent

## Assistants

An assistant helps your customers complete tasks and get information faster. It may clarify requests, search for answers from a knowledge base, and can also direct your customer to a human if needed.

Create assistant

blogbot

Skills (1)

blogbot

Integrations (1)



My first assistant

Built for you to explore and learn.

Skills (1)

My first skill

Integrations (0)

# Intents

Intents				
	Entities	Dialog	Analytics	Version History
<a href="#">Create intent</a>   				
<input type="checkbox"/> Intent (12) ▾	Description (optional)	Modified ▾	In Conflict	Examples
<input type="checkbox"/> #book_restaurant		15 days ago	5	
<input type="checkbox"/> #days_open	The user is asking what days are you ...	15 days ago	6	
<input type="checkbox"/> #General_About_You	Request generic personal attributes.	15 days ago	20	
<input type="checkbox"/> #General_Agent_Capabilities	Request capabilities of the bot.	15 days ago	30	
<input type="checkbox"/> #General_Connect_to_Agent	Request a human agent.	15 days ago	38	
<input type="checkbox"/> #General_Ending	End the conversation.	15 days ago	37	
<input type="checkbox"/> #General_Greetings	Greet the bot.	15 days ago	27	
<input type="checkbox"/> #General_Human_or_Bot	Ask if speaking to a human or a bot.	15 days ago	12	
<input type="checkbox"/> #General_Jokes	Request a joke.	15 days ago	17	
<input type="checkbox"/> #General_Negative_Feedback	Express unfavorable feedback.	15 days ago	20	
<input type="checkbox"/> #General_Positive_Feedback	Express positive sentiment or gratitu...	15 days ago	19	
<input type="checkbox"/> #General_Security_Assurance	Express concerns about the security ...	15 days ago	26	

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# Catalog

[Skills /](#)

[Try it](#)

Customer Care Sample Skill  
Sample simple customer service skill to get you started.

[Save new version](#) [⋮](#)

Intents Entities Dialog Analytics Version History **Content Catalog**

Get started more quickly by adding existing intents from the content catalog. These intents are trained on common questions that users may ask.

Category	Description (optional)	Intents	
<a href="#">Banking</a>	Basic transactions for a banking use case.	13	<a href="#">+ Add to skill</a>
<a href="#">Bot Control</a>	Functions that allow navigation within a conversation.	9	<a href="#">+ Add to skill</a>
<a href="#">Customer Care</a>	Understand and assist customers with information about themselves and your business.	18	<a href="#">+ Add to skill</a>
<a href="#">eCommerce</a>	Payment, billing, and basic management tasks for orders.	14	<a href="#">+ Add to skill</a>
<a href="#">General</a>	General conversation topics most users ask.	10	<a href="#">+ Add to skill</a>
<a href="#">Insurance</a>	Issues related to insurance policies and claims.	12	<a href="#">+ Add to skill</a>
<a href="#">Mortgage</a>	Get access to an entire mortgage AI system--including search integration, speech models, and more--for free: <a href="http://ibm.biz/mortgage">ibm.biz/mortgage</a>	20	<a href="#">+ Add to skill</a>
<a href="#">Telco</a>	Questions and issues related to a user's telephony service, device, and plan.	21	<a href="#">+ Add to skill</a>
<a href="#">Utilities</a>	Help a user with utility emergencies and their utility service.	10	<a href="#">+ Add to skill</a>

# Entities

The screenshot shows the 'Entities' tab of the 'Customer Care Sample Skill' in the IBM Watson Assistant interface. The top navigation bar includes 'Skills /' (with a magnifying glass icon), 'Try it' (with a speech bubble icon), and a blue button 'Save new version'. Below the title 'Customer Care Sample Skill' and subtitle 'Sample simple customer service skill to get you started.', there are tabs for 'Intents', 'Entities' (which is selected and highlighted in blue), 'Dialog', 'Analytics', 'Version History', and 'Content Catalog'. A 'My entities' section is displayed, showing a list of six entities: '@holiday', '@landmark', '@phone', '@reply', '@specialist', and '@zip\_code'. Each entity row contains a checkbox, the entity name, its values, and a 'Modified' timestamp. The 'Modified' column has a dropdown arrow. Below the table are three icons: a downward arrow, a download icon, and a trash bin icon. The entire interface has a light gray background with blue highlights for active sections.

Entity (6) ▾	Values	Modified ▾
@holiday	christmas eve, labor day, independence day, halloween, christmas, thanksgiv...	a few seconds ago
@landmark	grand central, times square, empire state building	a few seconds ago
@phone	US Phone pattern	a few seconds ago
@reply	no, yes	a few seconds ago
@specialist	Brenda, Derrik, Maria, Robert, Nicholas, Barbara	a few seconds ago
@zip_code	US Zip	a few seconds ago

# System Entities

The screenshot shows the 'Skills' interface with the 'Entities' tab selected. The title is 'Customer Care Sample Skill' with a subtitle 'Sample simple customer service skill to get you started.' A 'Try it' button is at the top right. Below the tabs are two buttons: 'Save new version' and a three-dot menu. The main content area is titled 'System entities' and contains a note about common entities created by IBM. A table lists seven system entities with their descriptions and status toggles.

Name (7) ▾	Description	Status
> <a href="#">@sys-currency</a>	Extracts currency values from user examples including the amount and the unit. (20 cents)	<input type="checkbox"/> Off
> <a href="#">@sys-date</a>	Extracts date mentions (Friday)	<input checked="" type="checkbox"/> On
> <a href="#">@sys-location</a> BETA	The @sys-location system entity extracts place names (country, state/province, city, town, etc.) from the user's input. (Boston)	<input checked="" type="checkbox"/> On
> <a href="#">@sys-number</a>	Extracts numbers mentioned from user examples as digits or written as numbers. (21)	<input checked="" type="checkbox"/> On
> <a href="#">@sys-percentage</a>	Extracts amounts from user examples including the number and the % sign. (15%)	<input type="checkbox"/> Off
> <a href="#">@sys-person</a> BETA	The @sys-person system entity extracts names from the user's input. (Anna)	<input checked="" type="checkbox"/> On
> <a href="#">@sys-time</a>	Extracts time mentions (at 10)	<input checked="" type="checkbox"/> On

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# Dialog

[Skills](#) /

## Customer Care Sample Skill

Sample simple customer service skill to get you started.

Intents Entities **Dialog** Analytics Version History Content Catalog

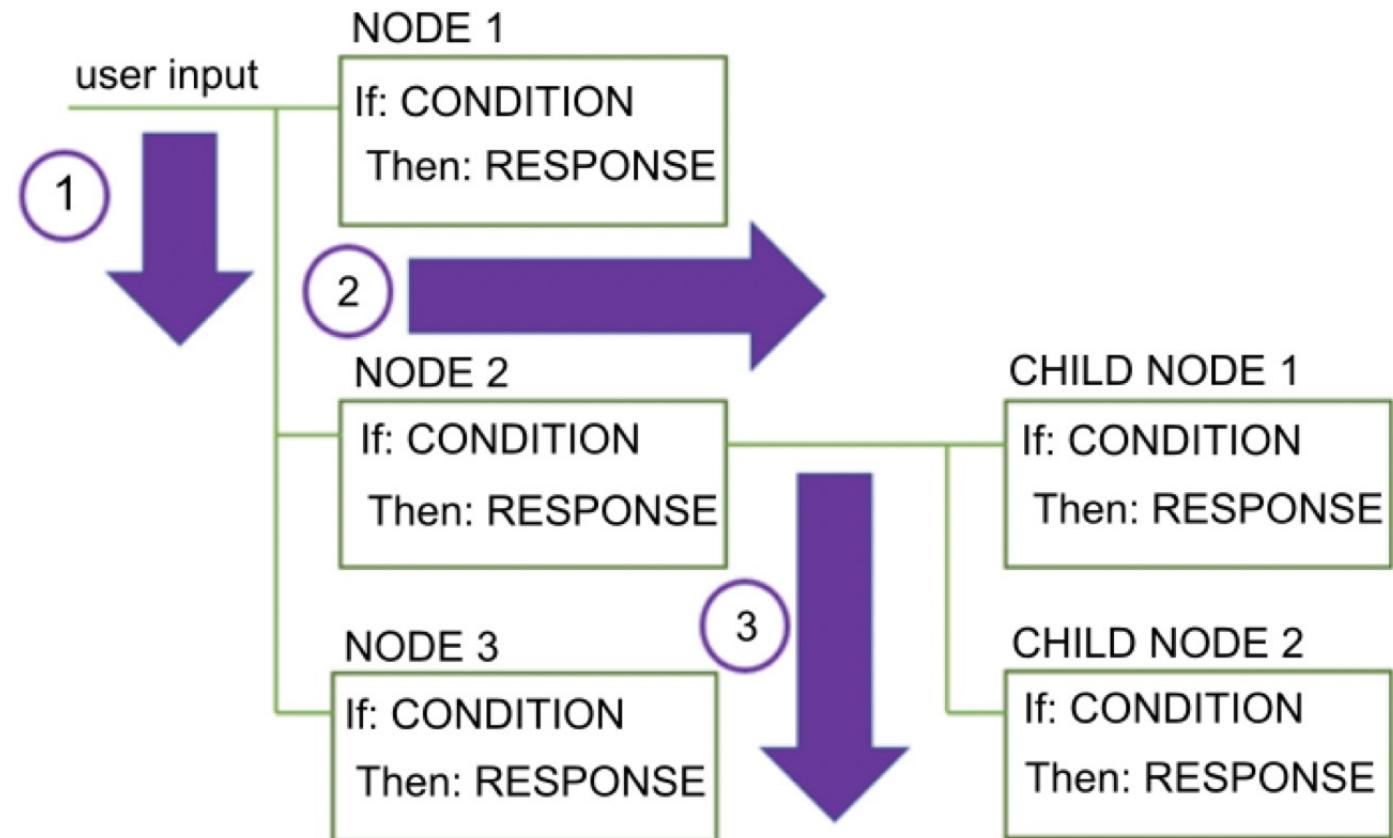
Node Type	Description	Code Snippet	Responses / Context / Slots / Returns
Opening	welcome	#Customer_Care_Store_Hours	1 Response / 1 Context set / Does not return
Hours of Operation	#Customer_Care_Store_Hours		5 Responses / 0 Context set / Returns
Directions and location	#Customer_Care_Store_Location		3 Responses / 0 Context set / Skip user input
Make an appointment	#Customer_Care_Appointments		3 Responses / 7 Context set / 5 Slots / Does not return
Transfer to agent	#General_Connect_to_Agent		1 Response / 0 Context set / Does not return
Small Talk			3 Dialog nodes / No digressions

# Dialog

Dialog is processed by the service from the first node in the tree to the last.

If the service finds a condition that is met, it triggers that node.

It then moves along the triggered node to check the user input against any child node conditions.



# Slots

Add slots to a dialog node to gather multiple pieces of information from a user within that node.

Slots collect information at the users' pace. Details the user provides upfront are saved, and the service asks only for the details they do not.

Book Reservation

Then check for:

	Check for	Save it as	If not present, ask
1	@cuisine	\$cuisine	What type of cuisine would you like?
2	@sys-date	\$date	What day would you like to eat?
3	@sys-time	\$time	What time would you like to eat?
4	@sys-number	\$number	How many people will be eating?

[+ Add slot](#)

# Digressions

Use digressions to handle interruptions and off topic short conversations.

Digressions allow the user to change topics or ask for more information and allows them to come back to the original intent.

Example:  
Make an appointment.  
What times are you open?

The screenshot shows the IBM Watson Assistant interface. On the left, the main workspace view displays a dialog flow with several nodes: 'Opening welcome', 'Hours of Operation', 'Directions and location', 'Make an appointment' (which is currently selected), and 'Transfer to agent'. The 'Make an appointment' node has a tooltip indicating it has 3 responses, 7 context sets, 5 slots, and does not return. Below these is a 'Small Talk' node. On the right, a modal window titled 'Customize "Make an appointment"' is open under the 'Digressions' tab. This window contains two sections: 'Digressions can go away from this node' and 'Digressions can come into this node'. Both sections have toggle switches labeled 'on'. Under the first section, there is a checkbox for 'Only dregress from slots to nodes that allow returns' and a note explaining that if a user goes off topic, only nodes with digressions that allow returns will be considered. Under the second section, there is a checkbox for 'Return after digression' and a note explaining that after the dialog flow is processed, it returns to the previous one. At the bottom of the modal are 'Cancel' and 'Apply' buttons.

# Handlers

Use handlers to

- provide responses to questions users might ask during the interaction that are tangential to the purpose of the node
- provide exit route

Example: I need to talk to an agent.

IBM Watson Assistant  
Workspaces / Customer Service - Sample / Dialog

Manage handlers for "Make an appointment"

Handlers are how your virtual assistant will respond when the user's answer to a prompt is not found. These handlers will be checked before trying the "Not found" responses in a slot.

If answer to any prompt is not found and:

If bot recognizes	Respond with
1 #Help	I see you need help making an appoi
2 #Cancel	OK. Canceling your request...
3 #Thanks	You are welcome. Let's continue.

+ Add handler

Cancel Save

Opening welcome  
1 Response / 1 Context set / Does not return

Hours of Operation  
#Customer\_Care\_Store\_Hours  
5 Responses / 0 Context set / Returns

Directions and location  
#Customer\_Care\_Store\_Location  
3 Responses / 0 Context set / Skip user input

Skip user input. The first child node

Provide location  
true  
1 Response / 0 Context set

Make an appointment  
#Customer\_Care\_Appointments  
3 Responses / 7 Context set / 5 Slots / Does not re

Transfer to agent  
#General\_Connect\_to\_Agent  
1 Response / 0 Context set / Does not return

# Deploy

## Add Integration

Select a deployment method that is managed for you and can be configured within the tool or learn about other ways to deploy the assistant.

### Managed integrations



#### Facebook Messenger

Make the assistant available to customers through Facebook Messenger on the web or on native mobile clients.



#### Preview Link

Embed the assistant in a chat widget hosted on an IBM-branded web page that your team can use for testing.



#### Slack

Make the assistant available to customers by adding it to a Slack app as a bot user.

### Other integrations

[Custom application](#) ↗

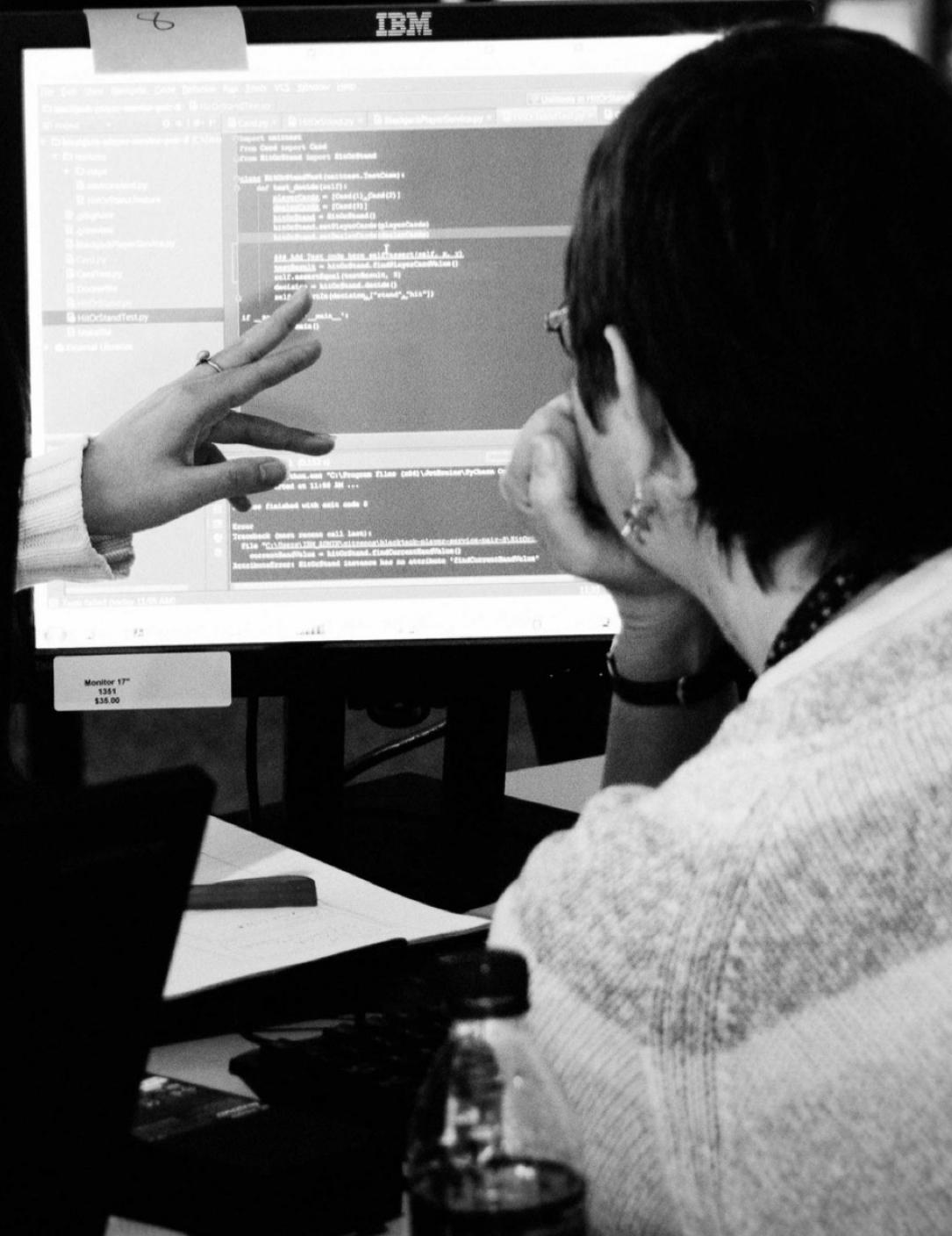
[Voice Agent \(Telephony\)](#) ↗

[WordPress plug-in](#) ↗

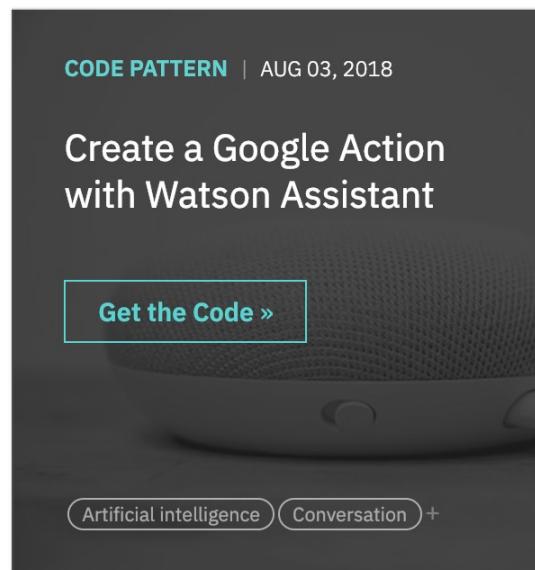
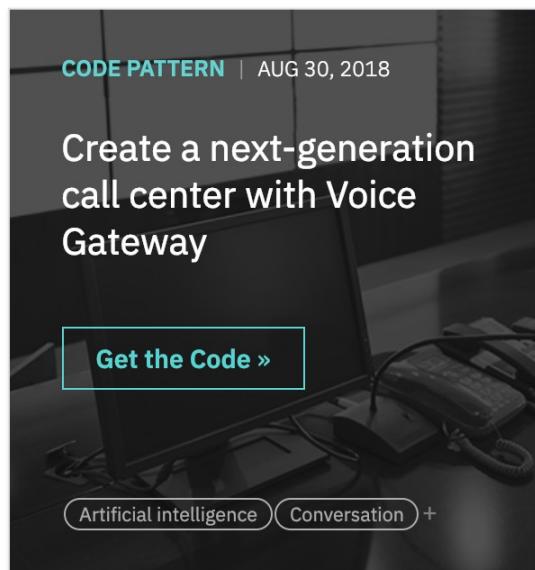
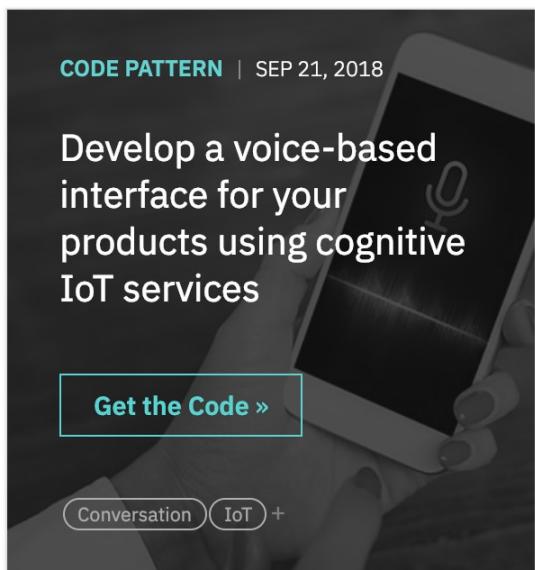
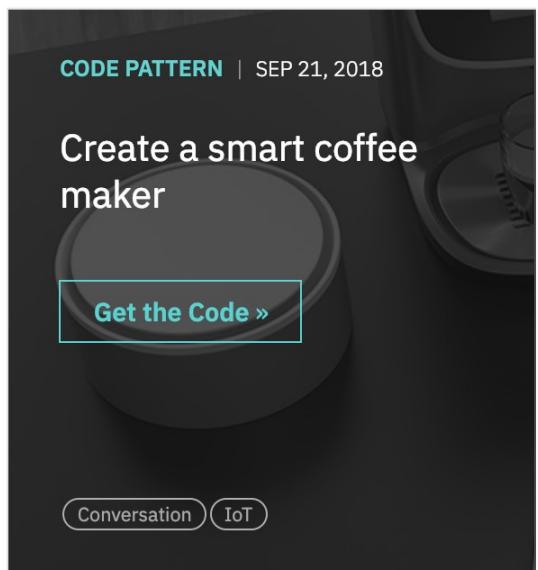
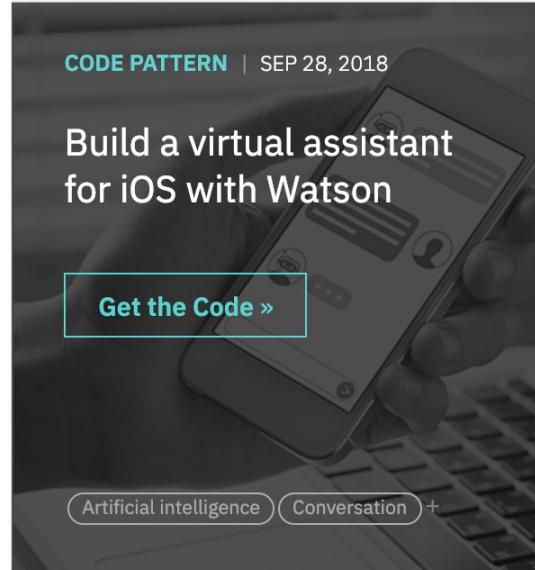
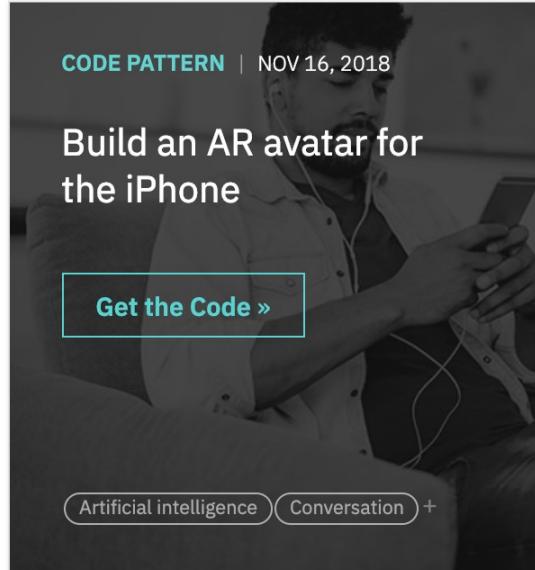
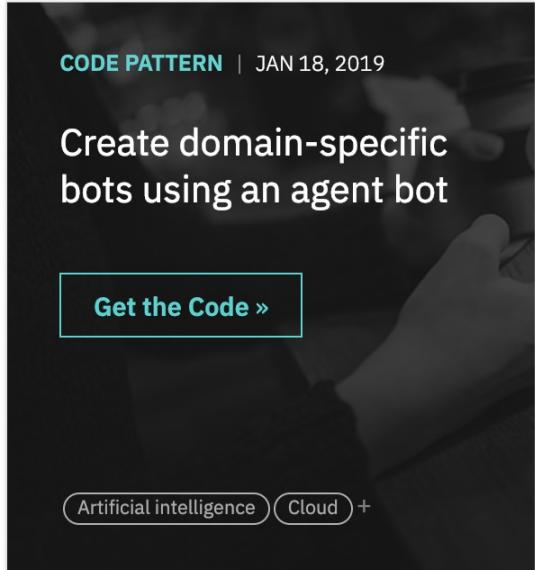
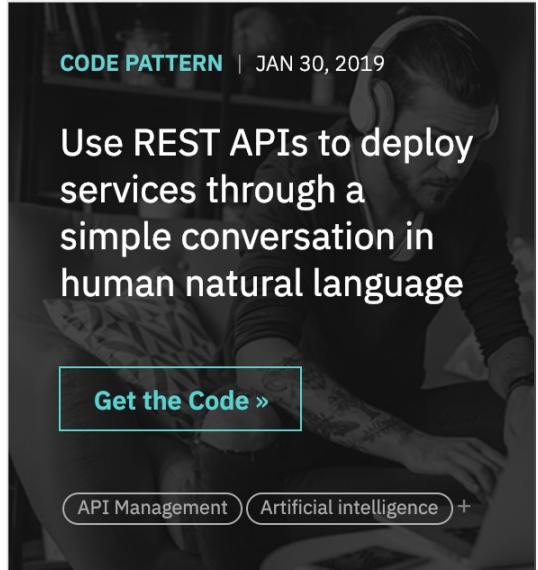
# Where to go from here ...

- Advance features
  - Disambiguation
  - New intents by clustering existing data
  - Handlers - handle interruptions in your dialog
  - Recommendations to create entities
  - Advanced analytics/testing/monitoring
- Call out to a service
  - Watson Assistant can call out to IBM Cloud Functions
- Add code to your bot
  - Watson Assistant Expression Language

# Demo



# IBM Code Patterns



# Thank you

## Let's chat !

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#BehindtheCode



It's about time  
developers got  
some attention.

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Developer

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