

Dialogflow | Machine Learning

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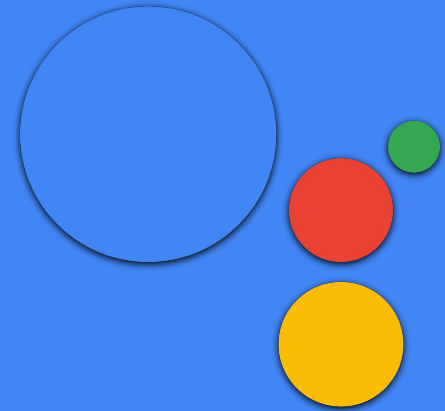


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- ★ CEO at www.softdigitalcompany.com

GDG Abomey-Calavi

Building a simple conversation



Build engaging conversations for the Google Assistant using Dialogflow

Learn how to use Dialogflow, Google's tool for building amazing conversational experiences that help your users get things done.

It uses Google's AI to make it easy to build apps that are fluent in natural language. you will learn how to use Dialogflow to build exciting conversational experiences for the Google Assistant

This session will demonstrate how to take advantage of Dialogflow's powerful, easy-to-use features to build engaging conversational Actions for users on the Google Assistant **for making enquiry about the sessions in today's I/O 2018 extended.**

[my blog on dialogflow for beginners](#)

Intent matching helps you figure out what a user wants. Intent is created for anything a user might request, hence, for each intent you create an example of various ways a user might communicate during a conversation.

For instance, I can ask what time I/O 2018 extended is started today in 3 different ways and add the following responses:

"How late can I come in?"
"What are your hours?"
"When will I/O Extended start?"

"I/O Extended is is between 8am and 4:30pm on June the 2nd 2018"
"I/O has started"

Dialogflow: Terms and definitions

Entity extraction helps you extract things your users mention. When a user expresses their intent, they want your agent to act on specific pieces of information contained within the statement. In Dialogflow, built-in system entities are used to retrieve information such as time, date, names, places and number from a user's intent.

you can also create your own developer entities by providing a list of words or phrases that fit a given concept.

So, when you create an intent and add example phrases, Dialogflow will recognise each entity that might be present. You can annotate any entity that Dialogflow did not recognize automatically. When a user says something that matches an entity, the value for any matching entity will automatically be extracted. This value can then be used in your backend code to give the user what they are asking for.

Dialog control helps you direct the flow of your conversation. There are two types of dialogs to consider when building voice interaction scenarios:

- Linear dialogs which the aim of which is to collect the information necessary to complete the required action. In the example above, we need to know if the participant wants to:

- confirm attendance,
- subscribe to a codelab session
- give us feedback about I/O

Dialogflow : Terms and definitions

- Non-linear dialogs which may have several branches, depending on users' answers. This takes twists and turns based on changes in context, user's statement is interpreted in the context of what is said before.

This implies that when you have yes/no questions, the response taken into account is dependent on the question that comes before it. In the example above, we can introduce a non-linear dialog this way:

When the user answered the first question, our agent knows the user is confirming attendance, as a result it asks about sending a list of codelabs sessions.

When the user answered the second question, our agent knows the user is confirming to receive the list of codelabs sessions

```
Confirm attendance, Output context:confirm-attendance
— Agent: Do you want to confirm attendance?
attendance.yes, input context:confirm-attendance, output
context: confirm-notification
attendance.no, input context: confirm-attendance
— User: Yes
notification.yes, input context: confirm-notification
— Agent: Should I send you a list of codelabs sessions?
— User: Yes, please
notification.no, input context: confirm-notification
```

An action is a third party experience for the Assistant

Step 1: login to Dialogflow on <https://console.dialogflow.com/>

Step 2: create an agent

Step 3: insert training phrases and responses on Welcome Intent

Step 4: Create a simple custom Intent

Step 5: Create a complex custom Intent

Step 6: Define parameters on complex custom Intent

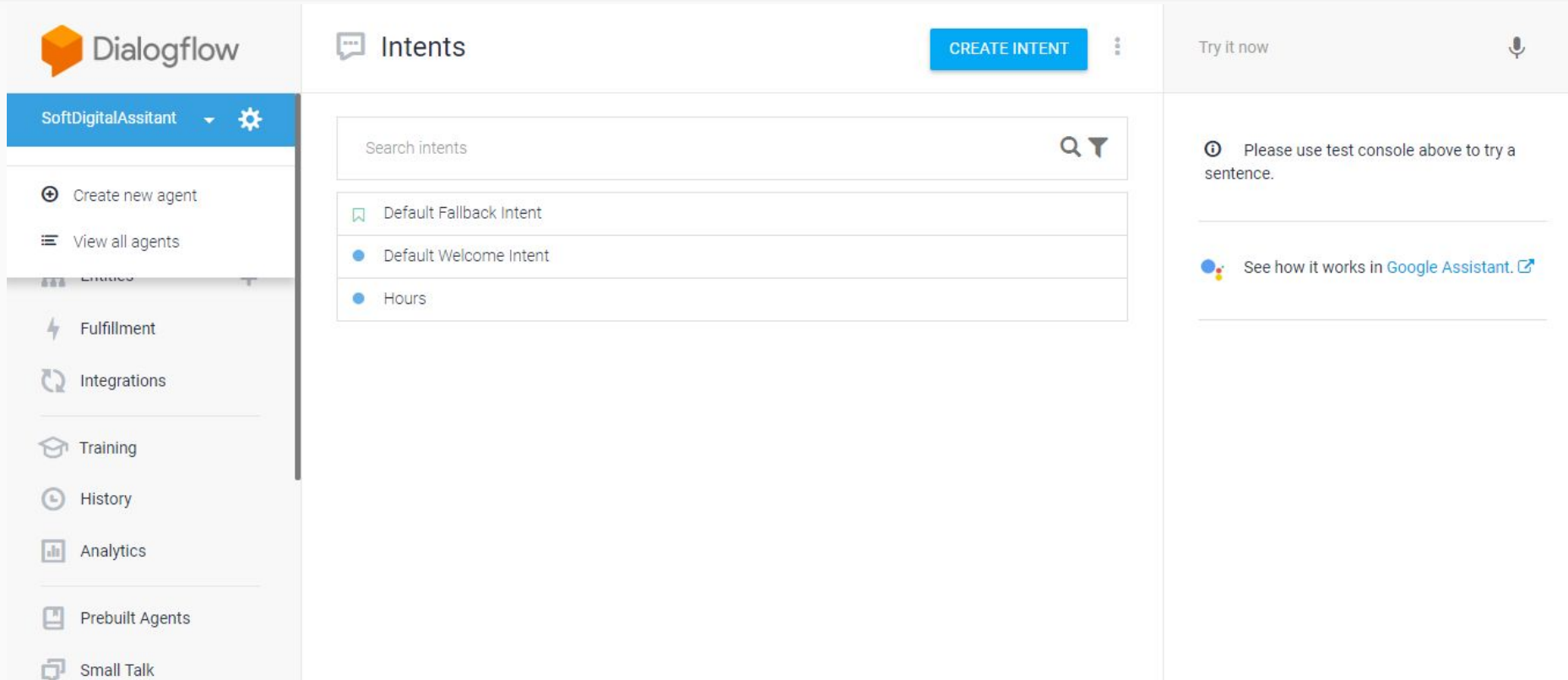
Step 7: Creating entities

Step 8: Create a follow up Intent

Step 9: Integrate your app

Step 10: Try out your actions..

#AoG : login to Dialogflow then create a new agent



The screenshot displays the Dialogflow web interface. On the left is a sidebar with the Dialogflow logo and a menu for the 'SoftDigitalAssitant' agent, including options like 'Create new agent', 'View all agents', 'Fulfillment', 'Integrations', 'Training', 'History', 'Analytics', 'Prebuilt Agents', and 'Small Talk'. The main area is titled 'Intents' and features a 'CREATE INTENT' button. Below this is a search bar and a list of existing intents: 'Default Fallback Intent', 'Default Welcome Intent', and 'Hours'. On the right, there is a 'Try it now' section with a microphone icon and instructional text: 'Please use test console above to try a sentence.' and a link to 'See how it works in Google Assistant.'

Dialogflow

SoftDigitalAssitant

- Create new agent
- View all agents
- Intents
- Fulfillment
- Integrations
- Training
- History
- Analytics
- Prebuilt Agents
- Small Talk

Intents

CREATE INTENT

Search intents

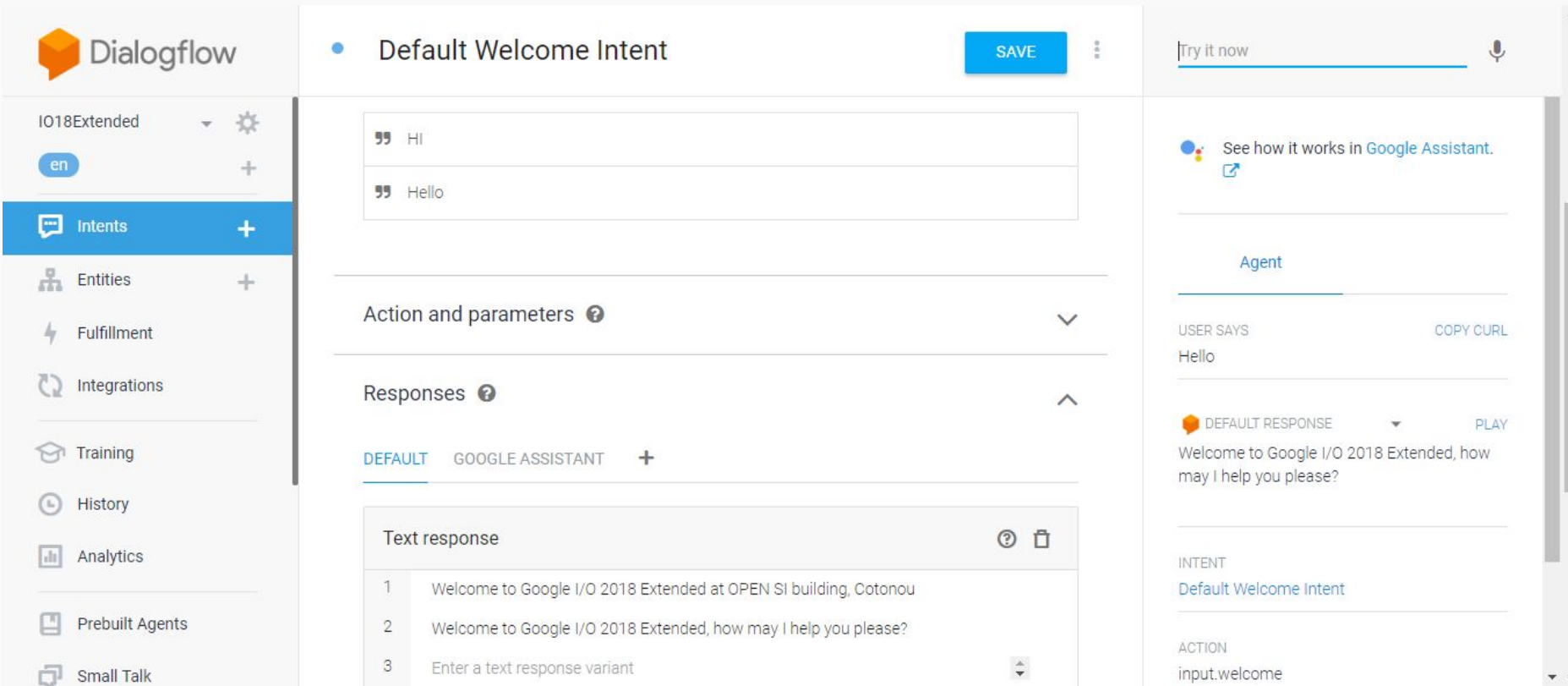
- Default Fallback Intent
- Default Welcome Intent
- Hours

Try it now

Please use test console above to try a sentence.

See how it works in [Google Assistant](#).

#AoG : insert training phrases and responses on the Default welcome Intent



The screenshot displays the Dialogflow console interface for configuring the 'Default Welcome Intent'. The left sidebar contains navigation links: IO18Extended, Intents (selected), Entities, Fulfillment, Integrations, Training, History, Analytics, Prebuilt Agents, and Small Talk. The main area is titled 'Default Welcome Intent' and includes a 'SAVE' button. It shows training phrases 'Hi' and 'Hello'. Below, the 'Responses' section is expanded, showing a list of three text responses under the 'DEFAULT' tab. The right sidebar shows a 'Try it now' input field and a preview of the agent's response: 'Welcome to Google I/O 2018 Extended, how may I help you please?'.

Dialogflow

IO18Extended en

Intents

Entities

Fulfillment

Integrations

Training

History

Analytics

Prebuilt Agents

Small Talk

Default Welcome Intent

SAVE

“ Hi

“ Hello

Action and parameters ?

Responses ?

DEFAULT GOOGLE ASSISTANT +

Text response ?

- Welcome to Google I/O 2018 Extended at OPEN SI building, Cotonou
- Welcome to Google I/O 2018 Extended, how may I help you please?
- Enter a text response variant

Try it now

See how it works in [Google Assistant](#).

Agent

USER SAYS COPY CURL

Hello

DEFAULT RESPONSE PLAY

Welcome to Google I/O 2018 Extended, how may I help you please?


INTENT


[Default Welcome Intent](#)


ACTION


input.welcome


#AoG : Create a simple custom Intent : Hours



IO18Extended 

en 

Intents 

Entities 

Fulfillment

Integrations

Training

History

Analytics

Prebuilt Agents

Small Talk


Hours


[SAVE](#)


When will I/O extended start?



What are your hours?

How late can I come in?


Action and parameters 



Responses 

DEFAULT 

Text response  

1 I/O Extended is is between 8am and 4:30pm on June the 2nd 2018


Try it now 

 See how it works in [Google Assistant](#). 

Agent

USER SAYS [COPY CURL](#)

Is I/O Extended happining now

DEFAULT RESPONSE  [PLAY](#)

I/O is is between 8am and 4:30pm on June the 2nd 2018


INTENT

Hours

ACTION

Not available

#AoG : Create a complex custom Intent : Confirm attendance



IO18Extended

en

Intents

Entities

Fulfillment

Integrations

Training

History

Analytics

Prebuilt Agents

Small Talk

Confirm attendance

SAVE

Can I confirm my attendance today at 4 p.m.?

Can I attend I/O Extended on Saturday?

I would like to confirm my attendance for 4 p.m

I would like to confirm my attendance

Action and parameters

Responses

DEFAULT

Text response

1 Okay, I have confirmed your attendance for Sdate at \$time . I will be expecting you!

Try it now

See how it works in Google Assistant.

Agent

USER SAYS COPY CURL

I want to confirm my attendance today at 8 a.m


DEFAULT RESPONSE PLAY



Okay, I have confirmed your attendance for 2018-06-02 at 08:00:00 . I will be expecting you!



INTENT



Confirm Session


#AoG : Action and parameters





IO18Extended  


 Intents 


 Entities 


 Fulfillment


 Integrations

 Training


 History

 Analytics

 Prebuilt Agents






 Small Talk

Confirm attendance

[SAVE](#) 


Action and parameters


Enter action name



REQUIRED 	PARAMETER NAME 	ENTITY 	VALUE	IS LIST 	PROMPTS 
<input checked="" type="checkbox"/>	time	@sys.time	\$time	<input type="checkbox"/>	What time do yo...
<input checked="" type="checkbox"/>	date	@sys.date	\$date	<input type="checkbox"/>	What date do yo...
<input type="checkbox"/>	Enter name	Enter entity	Enter value	<input type="checkbox"/>	—

[+ New parameter](#)

Responses

[DEFAULT](#) [GOOGLE ASSISTANT](#) 



9 a.m. 

 See how it works in [Google Assistant](#). 

Agent

USER SAYS [COPY](#) [CURL](#)

confirm my attendance

 **DEFAULT RESPONSE**  [PLAY](#)

What time do you want to come in?


CONTEXTS [RESET CONTEXTS](#)


confirm_attendance_dialog_context


c31dd5a3-b5c0-47b0-a2cf-98b844f29404_id_dialog_context



confirm_attendance_dialog_params_time



#AoG : Create an Entity: AttendanceInfo





IO18Extended 


en 


 Intents 


 **Entities** 


 Fulfillment


 Integrations

 Training


 History


 Analytics

 Prebuilt Agents

 Small Talk


AttendanceInfo



[SAVE](#) 

☒ Define synonyms  ☐ Allow automated expansion

event	event, keynote, morning session
codelabs	codelabs, code labs, code-labs, programming, afternoon session
Click here to edit entry	

[+ Add a row](#)



9 a.m. 

 See how it works in [Google Assistant](#). 

Agent

USER SAYS [COPY CURL](#)

confirm my attendance

 DEFAULT RESPONSE  [PLAY](#)

What time do you want to come in?


CONTEXTS [RESET CONTEXTS](#)

confirm_attendance_dialog_context

c31dd5a3-b5c0-47b0-a2cf-98b844f2940

Entity saved [OK](#)

#AoG : Create a follow up Intent: Confirm Attendance - custom

 Dialogflow

IO18Extended

en

Intents

Entities

Fulfillment

Integrations

Training

History

Analytics

Prebuilt Agents

Small Talk

Confirm attendance - custom

SAVE

Confirmattendance-followup Add input context

Contexts will be reset

Events

Training phrases

Add user expression

I want to attend the code labs session

I want to attend the whole event

I want to attend the keynote session

9 a.m.

See how it works in Google Assistant.

Agent

USER SAYS confirm my attendance

DEFAULT RESPONSE What time do you want to come in?


CONTEXTS

confirm_attendance_dialog_context

c31dd5a3-b5c0-47b0-a2cf-98b844f29404_id_dialog_context

confirm_attendance_dialog_params_time

#AoG : Create a follow up Intent: Confirm Attendance - custom

 **Dialogflow**

IO18Extended

en

Intents

Entities

Fulfillment

Integrations

Training

History

Analytics

Prebuilt Agents

Small Talk

Confirm attendance - custom

SAVE

Confirmattendance.Confirmattendance-custom

REQUIRED ?	PARAMETER NAME ?	ENTITY ?	VALUE	IS LIST ?	PROMPTS ?
<input checked="" type="checkbox"/>	Attendance	@Attendan celInfo	\$Attendan celInfo	<input type="checkbox"/>	You can att end ...
<input type="checkbox"/>	Enter name	Enter entity	Enter value	<input type="checkbox"/>	—

+ New parameter

Responses ?

DEFAULT GOOGLE ASSISTANT +

Text response

1 Okay, your attendance for \$AttendanceInfo is confirmed on #Confirmattendance-followup.date, at #Confirmattendance-followup.time . See you then !

9 a.m

See how it works in Google Assistant.

Agent

USER SAYS confirm my attendance COPY CURL

DEFAULT RESPONSE What time do you want to come in? PLAY

CONTEXTS RESET CONTEXTS


confirm_attendance_dialog_context



c31dd5a3-b5c0-47b0-a2cf-98b844f29404_id_dialog_context



confirm_attendance_dialog_params_time



 **GDG**



#AoG : Click on Google Assistant then click “Test”





IO18Extended  


 


 Intents 


 Entities 


 Fulfillment


 Integrations

 Training


 History




 Analytics

 Prebuilt Agents

 Small Talk

Integrations



















Google Assistant



Build Actions for the Google Assistant to reach users through Google Home, Android phones, and more devices.

[INTEGRATION SETTINGS](#)

 Web Demo 	 Facebook Messenger 	 Slack 	 Viber 
 Twitter	 Twilio IP	 Twilio (Text)	 Skype

Try it now 

 Please use test console above to try a sentence.

 See how it works in [Google Assistant](#). 

#AoG : Try your Actions...

The screenshot displays the 'Actions on Google' Simulator. The top navigation bar includes the 'Actions on Google' logo, the user 'IO18Extended', and a 'Go to docs' link. A left sidebar contains navigation options: Overview, SETUP (Language, Invocation), BUILD (Actions, Theme customization), and TEST (Simulator). The main area is titled 'Simulator' and shows a 'Draft Snapshot - 6/2/18, 6:55 AM' with a 'CHANGE VERSION' link. The simulated app, 'my test app', features a 'Talk to my test app' button and a conversation flow: a welcome message, a user request 'I want to confirm my attendance please', and a response 'What time do you want to come in?'. Below the response is a 'Suggested input' section with a 'cancel' button. On the right, a 'DISPLAY' tab shows a preview of the app's visual output, including a small window titled 'my test app' with a confirmation message. Other tabs like REQUEST, RESPONSE, AUDIO, DEBUG, and ERRORS are also visible.

Just for fun...



- Hey Google what is my name?
- Ok Google, sing a song for me please
- Hey Google, send a message to Micrette on whatsapp

(I am still learning bla bla bla...)

- Hey Google what is in the news?
- Okay Google, thank you!

Fulfilment in Dialogflow

Setting up Webhooks using Dialogflow

Your web service will receive a POST request from Dialogflow in the form of the response to a user query matched by intents with webhook enabled.

<https://www.pubnub.com/blog/setting-up-webhooks-using-dialogflow-pubnub-functions/>

Training a complex AI model

complex AI training phrases

<https://dialogflow.com/docs/dialogs>

<https://chatbotslife.com/api-ai-lets-create-a-movie-chatbot-in-minutes-f68d8bb568f9>

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Thanks !

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