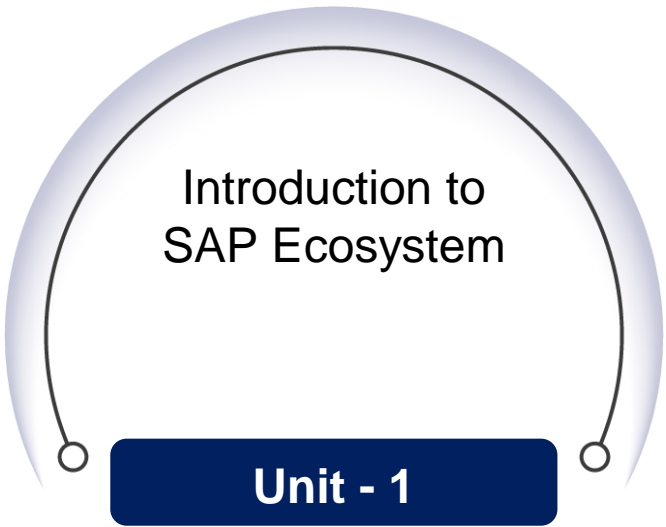


Module - 4

SAP



Units for Discussion



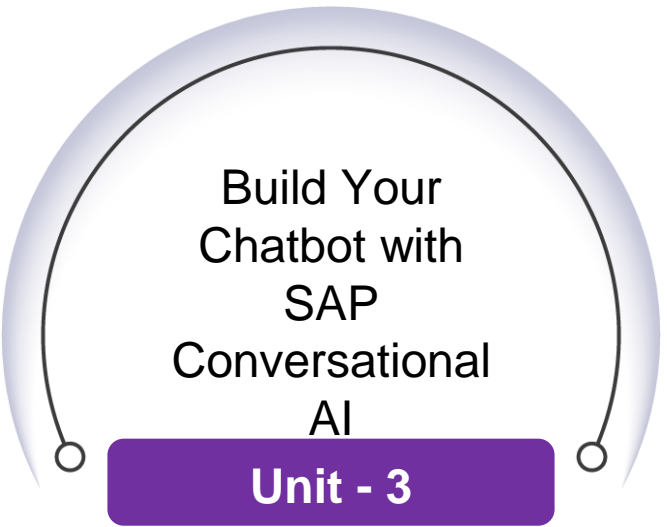
Introduction to
SAP Ecosystem

Unit - 1



SAP
Conversational
AI

Unit - 2



Build Your
Chatbot with
SAP
Conversational
AI

Unit - 3

Unit - 1

Build Your Chatbot with SAP Conversational AI

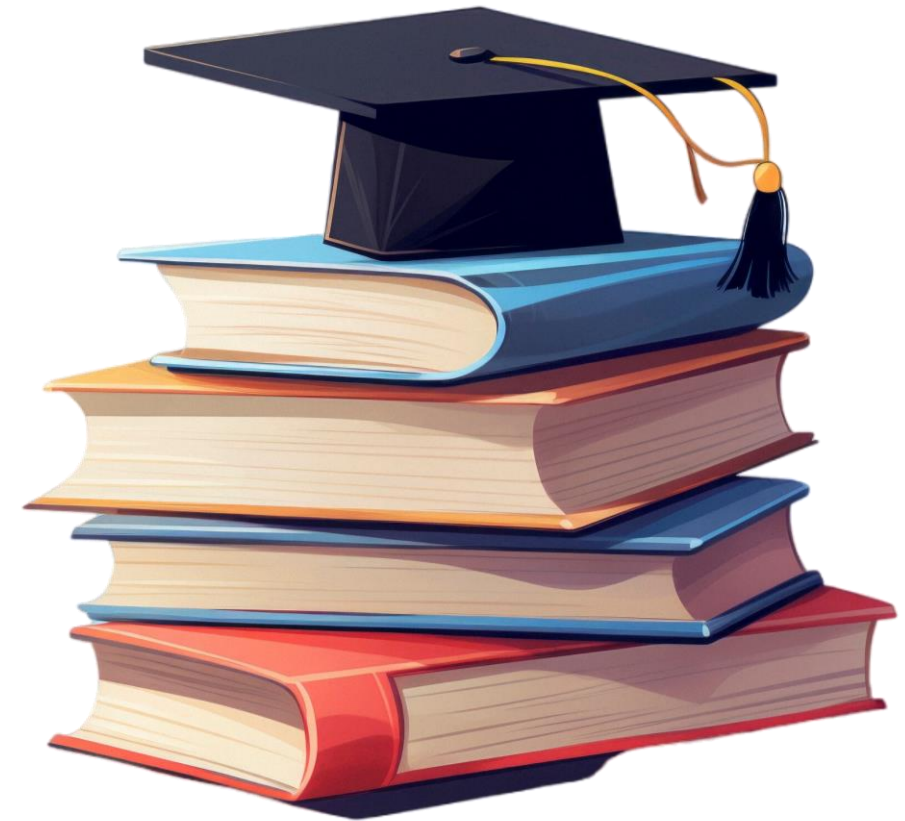


DISCLAIMER

The content is curated from online/offline resources and used for educational purpose only.

Learning Objectives

- Create SAP Conversational AI account
- Create new bot project
- The 4 stages of a bot's life
- Fork intent
- Create new intents
- Add expressions
- Test bot
- Manage conversation flow with skills
- Create new skill
- Test by chatting with bot



Source :

Lab - 1

Create a new bot project

Create SAP Conversational AI account

Go to <https://cai.tools.sap/>, and click Sign Up in the upper-right corner.

Follow the instructions for creating an account.

The screenshot shows the SAP Conversational AI registration process. A modal window titled "Registration" is open, overlaying the main website content. The modal is divided into several sections: "Tell Us About Yourself" with input fields for First Name, Last Name, and E-Mail; "Set Password" with input fields for Password and Re-Enter Password; and "Terms and Conditions" with a checkbox for agreement and a link to the privacy statement. A "Register" button is located at the bottom right of the modal. The background website shows the SAP Conversational AI logo, navigation links like "What's New" and "Learn More", and a "Sign Up" button in the top right corner. The footer of the modal mentions "SAP ID Service" and provides a link for existing users to get SAP Universal ID.

SAP Conversational AI | What's New | Learn More

Go to

Follow

Rev

Manage busi

Create SAP ID

Don't have a SAP ID by using the sa currently use to si

Create

Registration

Tell Us About Yourself

First Name *

Last Name *

E-Mail *

Set Password

Password *

Re-Enter Password *

Terms and Conditions

☐ I have read and understood the Terms and Conditions of SAP Conversational AI. *

Our privacy statement is available [here](#).

*Required

Register

SAP ID Service

Existing Users | One login for all accounts: [Get SAP Universal ID](#)

Sign Up

< 1 of 2 >

skills

Trouble Logging In?

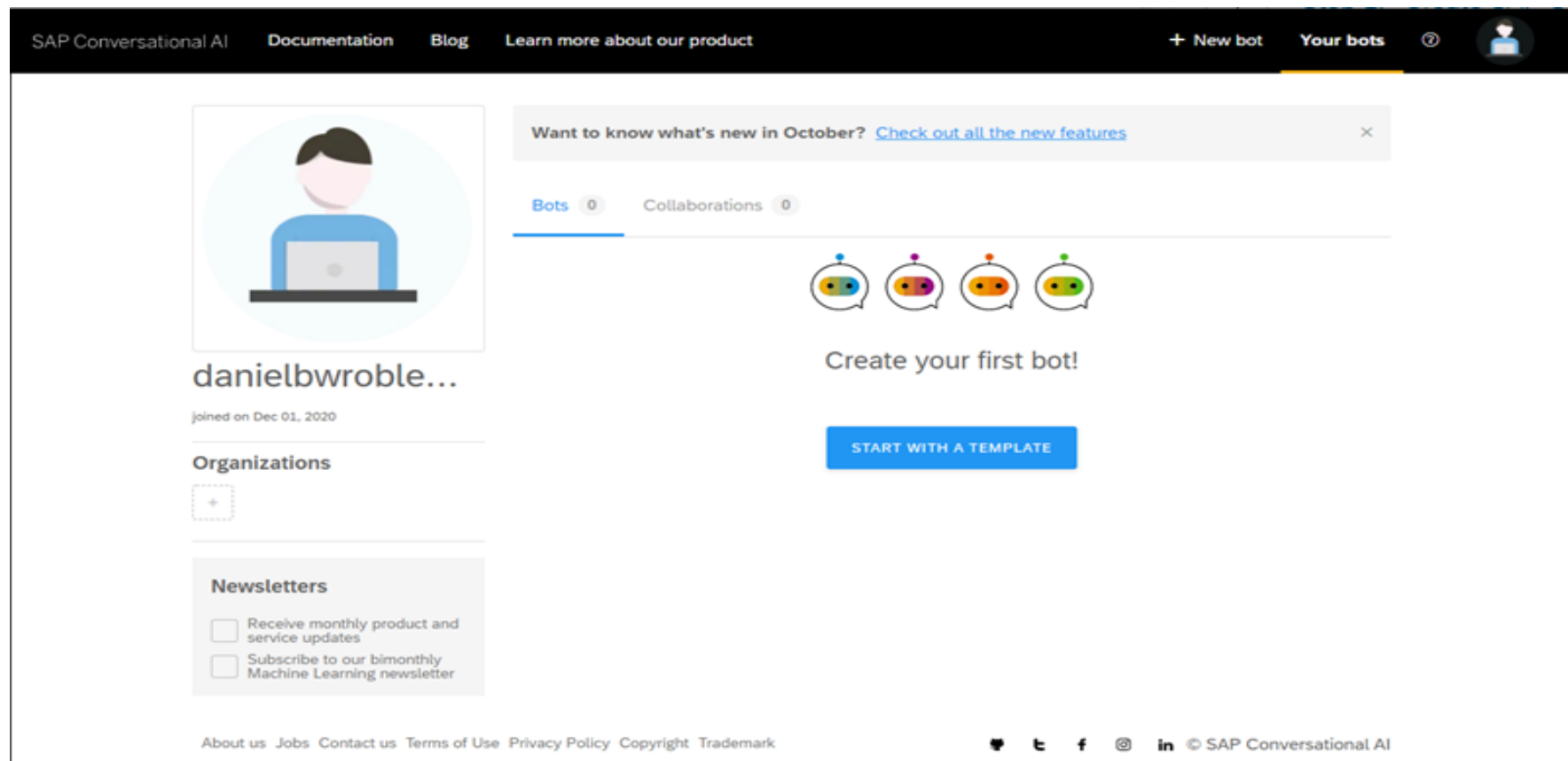
Step 11: Test yourself

You will get an email with a link to validate your account.

Create new bot project

1. Do one of the following:

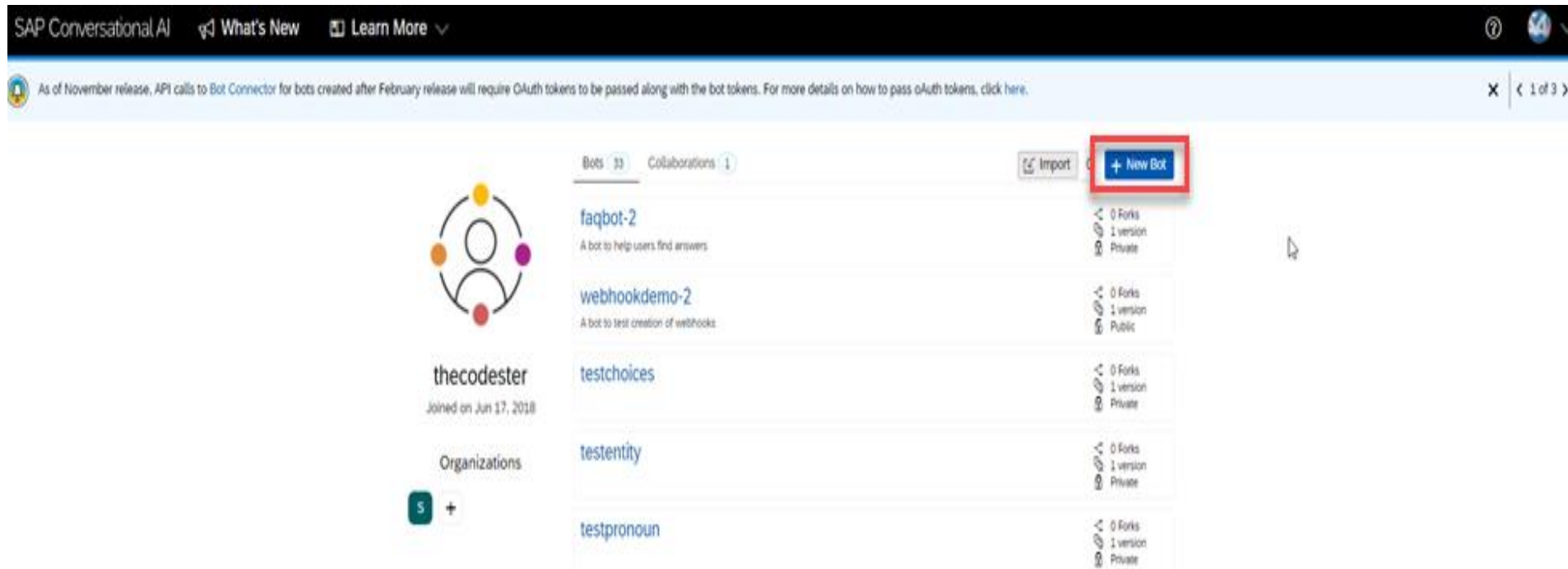
If you just validated your account by clicking the link in your email, click Start with a Template.



Create new bot project

If you are returning:

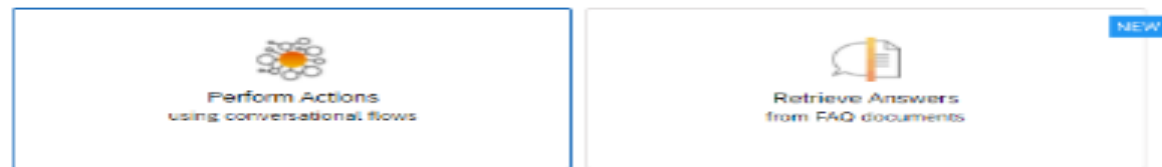
- Go to your home page by opening the URL <https://cai.tools.sap/> and sign in.
- Click New Bot.



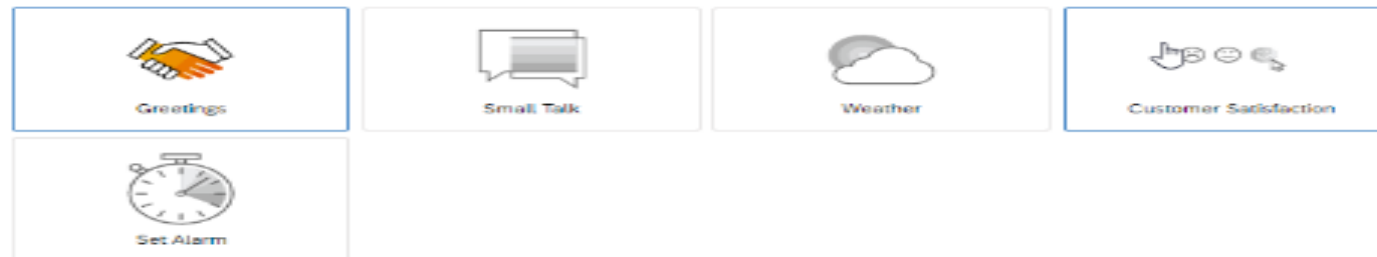
Create new bot project

- For Bot visibility, select Public.

1 What do you want your chatbot to do?



2 Select predefined skills for your bot



3 Create your bot

thecodester /

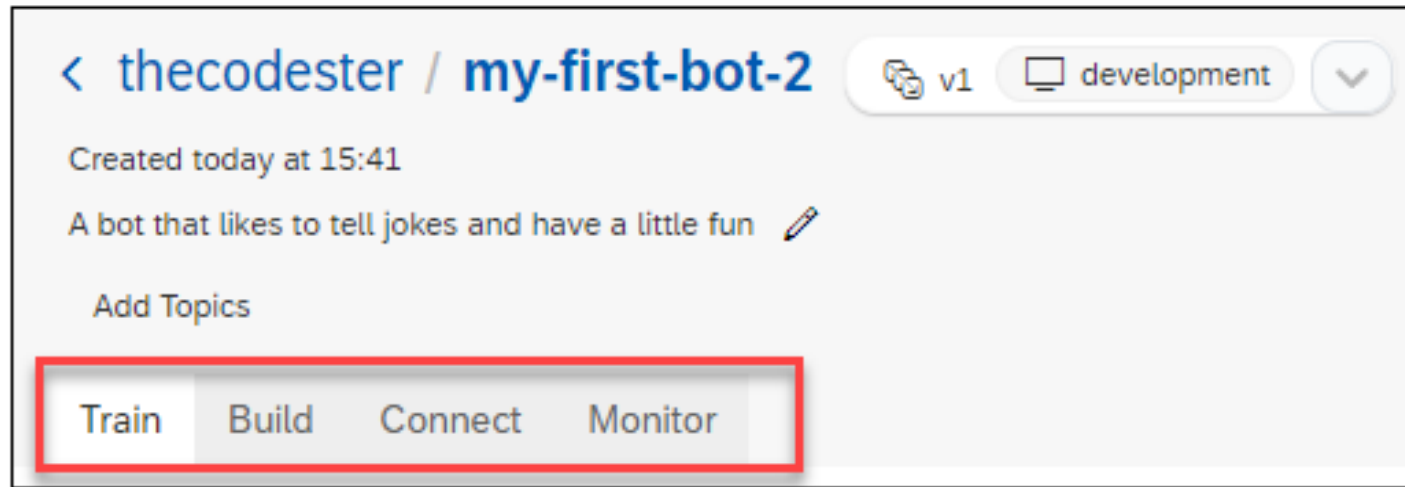
Description (optional)

3. Click Create a bot.

The 4 Stages of a bot's life

- **Train:** Teach your bot what it needs to understand.
- Here you will create *intents* – ideas your bot will recognize – using *expressions* that the bot should recognize coming from the user.
- **Build:** Create your conversational flow with our Bot Builder tool. Here you give your bot skills it can perform.
- Here you will create skills – things your bot can do – and define when they will be triggered. Your skills are defined by triggers, requirements (information your bot must collect), and the actions.
- **Connect:** Ship your bot to one or several messaging platforms.
- **Monitor:** See how users are communicating with your bot, check if the bot is understanding users correctly, and make updates to the bot's intents/entities. Monitoring also lets you see what your users want, and gives your ideas of what additional capabilities you could add to the bot.

The 4 Stages of a bot's life



Fork Intent

- Now we will work in the Train tab, where will build intents. Remember, intents are the things people want to tell our bot. Within an intent, we indicate all the possible expressions that a person might use to communicate that intent.
- As SAP Conversational AI is collaborative, you do not have to re-create each intent every time. You can “fork” an intent someone has already created and clone it right into your bot.
- Go to the Train tab.
- In the Search box, enter joke, and press Search.

As of November release, API calls to Bot Connector for bots created after February release will require OAuth tokens to be passed along with the bot tokens. For more details on how to pass OAuth tokens, click [here](#).

< thecodester / my-first-bot-2 v1 development >

Created today at 15:41
A bot that likes to tell jokes and have a little fun

Add Topics

Train Build Connect Monitor Settings

Intents Entities

● Your training Today 10/18/21 at 15:41:31 finished successfully on Today 10/18/21 at 15:41:34

★ TIPS
Hey there! I can help you to improve your bot, please follow the instructions to train your bot well!

Create and manage your intents

Your intents What's an intent?

joke Search + New Intent

Find an intent within your list...

Edit mode


@ goodbye #Number ★ #Organization ★ #Duration ★ more... 52


@ greetings #Person ★ #DateTime ★ #Pronoun ★ 48


Fork Intent


- You will get a list of intents to fork.


Search


 [lucero-davi](#) / [sales-cloud-assistant-cai-redesign](#) / [@ask-joke](#)
Ask for a funny joke
A joke for me • Can you tell me a joke ? • just be funny?
Language: en




 Fork

 [srvenkat5](#) / [joke-bot-7](#) / [@ask-joke](#)
Ask for a funny joke
Botty bot, can you tell me a joke please? • Tell me a joke • Can you tell me a joke ?
Language: en

 Fork

 [vitalii_romanenko-epam-com](#) / [sendlinks](#) / [@ask-joke](#)
Ask for a funny joke
Tell me a joke • Can you tell me a joke ? • A joke please
Language: en

 Fork

Fork Intent

3. Click **Fork** for the first `@ask-joke` intent.

There are many existing intents and the choices are always changing.

4. Explore the intent by clicking on it.

In the intent we forked, there are 2 expressions to discern if someone wants to be told a joke. In yours, you may receive more expressions.



Fork Intent

< thecodester / my-first-bot-2 v1 development

Created today at 15:41
A bot that likes to tell jokes and have a little fun

Add Topics

Train Build Connect Monitor Settings


my-first-bot-2 / intents / @ask-joke  

Ask for a funny joke

TIPS
Hey there! I can help you to improve your bot, please follow the instructions to train your bot well!


Train your intent using expressions

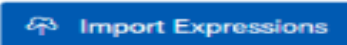
Intent overview


 25 EN 25







#Number ★ 10 #Pronoun ★ 22

Expression

 + Add Language

Type an expression to add... 

All 

| | | |
|--------------------------|--------------------------------------|---|
| <input type="checkbox"/> | Something fun ? |    |
| <input type="checkbox"/> | Can you share with me a kinky joke ? |    |

Create New Intents

1. Click the Train tab.
2. Create an intent for recognizing good reactions to jokes.

The screenshot shows the Dialogflow console for a bot named 'my-first-bot-2' by 'thecodester'. The interface includes a top navigation bar with 'Train', 'Build', 'Connect', and 'Monitor' tabs, and 'Intents' and 'Entities' sub-tabs. A message indicates that training finished successfully but is outdated. A 'TIPS' section provides advice on improving intent expressions. The 'Intents' tab is active, showing a search bar and a '+ New Intent' button.

< thecodester / my-first-bot-2 v1 development

Created today at 15:41

A bot that likes to tell jokes and have a little fun

Add Topics

Train Build Connect Monitor

Intents Entities

Your training **Today 10/18/21 at 15:41:31** finished successfully on Today 10/18/21 at 15:41:34 but is outdated. Additional changes in your dataset have been made during the training. [Please try again.](#)

★ TIPS

Some of your intents have less than 50 expressions. Ensure your intent has at least 50 expressions to improve your dataset. Add expressions with different sentences but the same meaning and be sure to have only one sentence by expression

Search and fork an intent from the community

+ New Intent

Create and manage your intents

Your intents [What's an intent?](#)

Search and fork an intent from the community

+ New Intent

- For the name of the intent, enter laughs.
- For the description, enter A natural reaction to our awesome jokes.

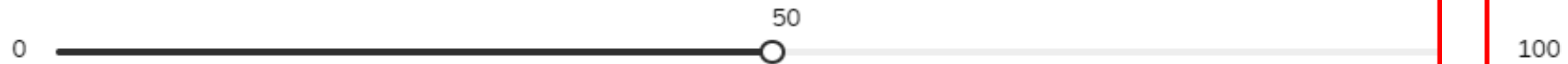
Let's create your intent

thecodester / my-first-bot-2 / laughs

Your intent description (optional)

A natural reaction to our awesome jokes.

Matching Strictness ⓘ



Cancel

Create Intent

3. Create a second intent, this time for bad reactions to jokes.
 1. Click Create.
 2. For the name of the intent, enter lame.
 3. For the description, enter You can't succeed every time.
 4. Click Create Intent.

Add expressions

1. Click on the **@laughs** intent.
2. In the expression field, enter a sentence you want your bot to understand, then press Enter.

The screenshot shows the Edunet Foundation interface for training a bot named 'my-first-bot-2'. The bot was created today at 15:41 and has the description 'A bot that likes to tell jokes and have a little fun'. The interface includes tabs for 'Train', 'Build', 'Connect', and 'Monitor', with 'Train' currently selected. A 'Settings' icon is also present. The current view is 'my-first-bot-2 / intents / @laughs', with a description 'A natural reaction to our awesome jokes.' and a 'Fork' button. A tip box states: 'Hey there! I can help you to improve your bot, please follow the instructions to train your bot well!'. Below this, the section 'Train your intent using expressions' is shown. Under 'Intent overview', it says 'Intent overview is available after adding expressions...'. The 'Expression' section shows a language selector set to English and a '+ Add Language' button. A text input field contains the expression 'I haven't laughed that much in a long time!', which is highlighted with a red box. To the right of the input field is a blue button labeled 'Import Expressions'. At the bottom, a message box with a speech bubble icon states: 'No expressions added. Start by adding expressions above to build your intent.'

Train bot

- Click the Train button at the top-right, so that the bot trains itself based on the latest intents and expressions
- The button indicates the current status of training: Yellow is out of date, blue is training, green is up to date.



- You can change the settings so the bot automatically trains itself at **Settings > Version > (current version dropdown)**, and scroll down to

< thecodester / my-first-bot-2 v1 development Train Fork 0 Export 0

Created today at 15:41

A bot that likes to tell jokes and have a little fun

Add Topics

Train Build Connect Monitor

1 Settings

Bot Options

Collaborators

System Aliases

Tokens

Data Policy

Danger Zone

Versions 2

Environments

Use versioning to track progress, iterate or manage your bot

Version 1

+ New Version

3

Tokens

Request token

337c595008c157abbf600b7e83da6192

You can use the request token above to make runtime API requests on:

<https://api.cai.tools.sap/build/v1/dialog> to use bot builder (API Reference)

<https://api.cai.tools.sap/v2/request> to analyze text (API Reference)

2. At the bottom of the panel, open the **Expression Analysis** tab.

Create and manage your intents

Your intents [What's an intent?](#)

Search and fork an intent from the community

Search

+ New Intent

Find an intent within your list...

Edit mode ☐

@ lame

Pronoun ★

Number ★

4

@ laughs

Number ★

Pronoun ★

4

@ ask-joke

Pronoun ★

Number ★

4

@ goodbye

Number ★

Organization ★

Duration ★

more...

52



Expression Analysis
Shift+Alt+E

3. Enter something that you think should match the intent, like:

Text

Copy

1 | Botty bot, can you tell me a joke please?

The screenshot displays the SAP AI Bot Builder interface. On the left, a list of intents is shown, with the first one being 'ask-joke'. The main panel on the right shows the 'Expression Analysis' for this intent. The language is set to English. The user input is 'Botty bot, can you tell me a joke please?'. The analysis identifies the user is referring to '@ask-joke'. Below this, it lists the entities in the expression: 'you' (Pronoun), 'me' (Pronoun), and 'a' (Number). At the bottom, there is a search bar and a 'New Intent' button. A red arrow points from the text input field in the previous block to the search bar in this interface.

Learn More

created after
ng with the bot
here.

Fork 0 Export 0

Settings

fully on Today 10/18/21 at

nsure your intent has at
ressions with different
only one sentence by

Search + New Intent

Edit mode

noun ★ #Number ★

Expression Analysis

Language JSON View

POST <https://api.cai.tools.sap/v2/request>

User said:
Botty bot, can you tell me a joke please?

User is referring to:
 @ask-joke

In the expression there are:

- #Pronoun ★ you
- #Pronoun ★ me
- #Number ★ a

See more in the JSON view

Botty bot, can you tell me a joke please?

Manage Conversation flow with Skills

- Open the Build tab

The screenshot shows the 'Build' tab in the Dialogflow console for a bot named 'my-first-bot-2'. The interface includes a header with the bot's name, version (v1), and environment (development). Below the header, there are tabs for 'Train', 'Build', 'Connect', and 'Monitor', with 'Build' being the active tab. A 'Train' button is visible in the top right corner. The main area is a grid where skills are added. A dropdown menu is open on the left, showing options: 'Add skill', 'Add skill group', and 'Add template'. On the grid, three skill cards are visible: 'greetings' (yellow header), 'fallback' (grey header), and 'disambiguation' (blue header). Each card has a plus icon on the left, the skill name in the center, and a toggle switch on the right. The 'greetings' skill is currently turned on. The 'fallback' and 'disambiguation' skills are also shown with their respective headers and toggle switches.

Create New Skill

Now let's build a skill to tell a joke.

1. Go back to the Build tab – where you see the canvas.
2. Click Add skill.
3. Call your skill [tell-me-a-joke](#), set the type as Business, and click Add.

×

Add Skill

Name

tell-me-a-joke

241

ex. book-flight, checkout

Type

Business

Floating

Initialize

Business skills reflect the core purpose of your bot.


Activation

☒

Your skill is active. If you deactivate it, your bot will no longer use it when chatting.

Title

Your bot automatically uses this skill title when disambiguating during chat. If you don't specify one, your bot will display: **tell-me-a-joke**



Cancel

Add

Create New Skill

4. Click the new tell-me-a-joke skill, and open the Triggers tab.
 5. Add 3 If statements, one for each of the @ask-joke, @laugh, and @lame intents.
- Click in the empty space right after If, select the @ask-joke intent, and then click Save.

Trigger this skill only if: [How do triggers work?](#)

The screenshot shows the 'Triggers' tab for a skill. At the top, there's a header 'Trigger this skill only if: [How do triggers work?](#)'. Below this, there's a section for adding triggers. A red circle with the number '1' points to the 'If' field. A red circle with the number '2' points to the '@ask-joke' intent in the 'User says' list. A red circle with the number '3' points to the 'Save' button.

| User says | entity is detected | in the conversation |
|------------|--------------------|------------------------|
| @lame | #Cardinal | _sentiment |
| @laughs | #Color | _source |
| @ask-joke | #Datetime | _language |
| @goodbye | #Distance | _processing_language |
| @greetings | #Duration | _memory |
| | #Email | _skill |
| | #Emoji | _skill_occurences |
| | #Interval | _conversation_language |
| | #Ip | _client_info |
| | #Job | |
| | #Language | |
| | #Location | |

[+ New Intent](#)


You can easily use the entities enrichment, ex: #location.lat




[View more about conditions](#)

Create New Skill

- Click on the + sign - Add a new list of conditions - and repeat the above for @laughs and @lame intents.
- Change the logical conditions to or between each If statement, simply by clicking And.

Trigger this skill only if: [How do triggers work?](#)



| | | | | |
|-----------------------------------|--|---|---|----------------------------------|
| If | <input type="text" value="@ask-joke"/> | <input type="text" value="is-present"/> |  | <input type="button" value="+"/> |
| <input type="button" value="OR"/> | | | | |
| If | <input type="text" value="@laughs"/> | <input type="text" value="is-present"/> |  | <input type="button" value="+"/> |
| <input type="button" value="OR"/> | | | | |
| If | <input type="text" value="@lame"/> | <input type="text" value="is-present"/> |  | <input type="button" value="+"/> |
| <input type="button" value="+"/> | | | | |

Create New Skill

6. Go to the Actions tab.
7. Click New Action Group, then Add Condition.
 - After the If, select the @ask-joke intent, and click Save.
8. Click Choose Message Type, choose the Text format, and type in a really good joke, like:

I just flew into town, and boy are my arms tired.
9. Click Save.

When all requirements are met, craft your bot's response [What's an action?](#)

The screenshot shows the 'Actions' tab in the Edunet Foundation interface. A new action group is being created with the condition 'If @ask-joke is-present'. A red arrow points to the 'Add a new message (randomly picked)' button, which is highlighted by a tooltip. The message type is set to 'Text' and the message content is 'I just flew into town, and boy are my arms tired.' The interface also shows a 'Markdown syntax is disabled' warning and a menu icon. At the bottom, there are four buttons: 'Choose Message Type', 'Connect External Service', 'Connect Fallback Channel', and 'Update Conversation'.

UK

If @ask-joke is-present

Add a new message (randomly picked)

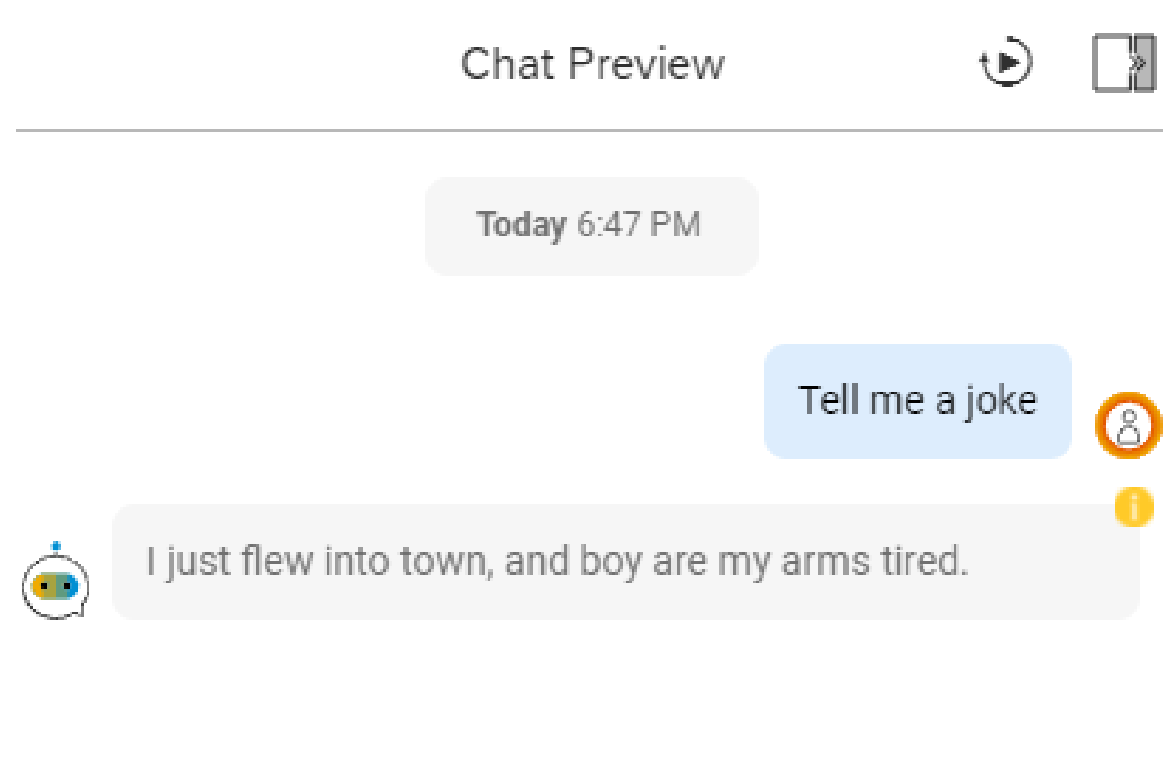
I just flew into town, and boy are my arms tired.

<> Markdown syntax is disabled.

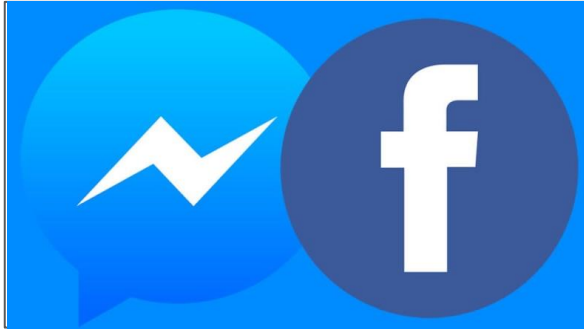
≡

Choose Message Type Connect External Service Connect Fallback Channel Update Conversation

Test by chatting with bot



Integration



Lab - 2

Integration with Telegram

Assignment

- Build a chatbot for travelling website
- Build a chatbot for your institution
- Build a chatbot for career counselling
- Build a chatbot for e-commerce websites
- Build a chatbot for Health Care
- Build a chatbot for HR Recruitment

Note : You can take reference from Disha the official IRCTC Chatbot, Amazon & Flipkart chatbot etc.

Conclusion

- We have completed this section and now we have understood about:
- SAP Conversational AI is a powerful platform for building and deploying chatbots and virtual assistants.
- A clear understanding of the lifecycle of a bot.
- Creating new intents, skills.
- Testing the bot before deploying it to users.



Source :

References

- <https://cai.tools.sap/>
- <https://learning.sap.com/learning-journey/utilize-low-code-no-code-applications-and-automations-for-citizen-developers>
- <https://learning.sap.com/learning-journey/getting-started-with-ux>
- <https://learning.sap.com/learning-journey/discover-sap-business-technology-platform>
- <https://learning.sap.com/learning-journey/explore-sap-analytics-cloud>
- <https://learning.sap.com/learning-journey/get-started-with-abap-programming-on-sap-btp>
- <https://learning.sap.com/learning-journey/discover-the-foundations-of-sap-commerce-cloud-and-sap-s-4hana-cloud-integration>



Quiz

1. What is the first step in getting started with SAP Conversational AI?

- a) Create a new bot project
- b) Create an account
- c) Define intents and expressions
- d) Test the bot



Answer: B

Create an account

Quiz

2. How can you test a bot in SAP Conversational AI?

- a) Create a new skill
- b) Fork an intent
- c) Add expressions
- d) Chat with the bot



Answer: D

Chat with the bot

Quiz

3. What are the four stages of a bot's life in SAP Conversational AI?

- a) Creation, Training, Deployment, Optimization
- b) Design, Testing, Deployment, Monitoring
- c) Setup, Development, Testing, Launch
- d) Initiation, Learning, Interaction, Improvement

Answer: A

Creation, Training, Deployment, Optimization



Quiz

4. What does it mean to "fork intent" in SAP Conversational AI?

- a) Create a new bot project
- b) Duplicate an existing intent to create a new one
- c) Test the bot's responses
- d) Manage conversation flow with skills

Answer: B

Duplicate an existing intent to create a new one



Quiz

5. Which of the following is a step in creating new intents in SAP Conversational AI?

- a) Testing the bot
- b) Managing conversation flow with skills
- c) Adding expressions
- d) Creating a new account



Answer: C

Adding expressions

Thank You