

SAP Conversational AI









Let's build a (dummy) chatbot

in an hour



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Agenda

1.  Competitors
2.  SAP CAI
3.  Overview
4.  Intents & entities
5.  Usage
6.  Architecture
7.  Links
8.  Your turn!

Competitors

amazon

amazon echo

Nov. 2014



 wit.ai

Jan. 2015



Google

 api.ai

Aug. 2017



 RECAST.AI

Jan. 2018



SAP Conversational AI (Recast.AI)

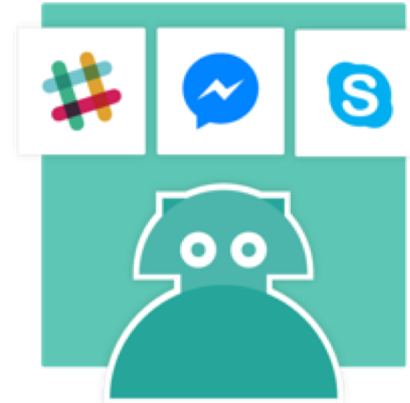
BUILD



TRAIN



CONNECT



MONITOR



SAP CAI Components

SAP Conversational AI

- SAP CAI product (based on the acquisition of Recast.AI) that provides all the tools necessary to create chatbots and conversational applications

NLP Engine

- Engine for natural language processing (NLP) and understanding (NLU)
- Receives a user expression and, based on prior training, extracts and returns actionable data such as recognized intents, entities (potentially enriched with further data, such as geo-locations), confidence scores, and user sentiments

Bot Builder

- Graphical user interface (also available as programmable API) to easily create bots and model a bot's conversational flow
- Allows the definition of skills including trigger conditions, requirements, and actions to control the conversation
- Depends on the data provided by the NLP Engine to trigger adequate skills

Bot Connector

- An adapter developed by SAP Conversational AI to simplify the integration into various communication channels (e.g. Webchat, Slack, Facebook Messenger)
- Translates user input and bot responses into the technical format required by the utilized communication channel
- Is usually transparently consumed within CAI, but can be entirely re-developed on-premise to gain full control of the bot runtime

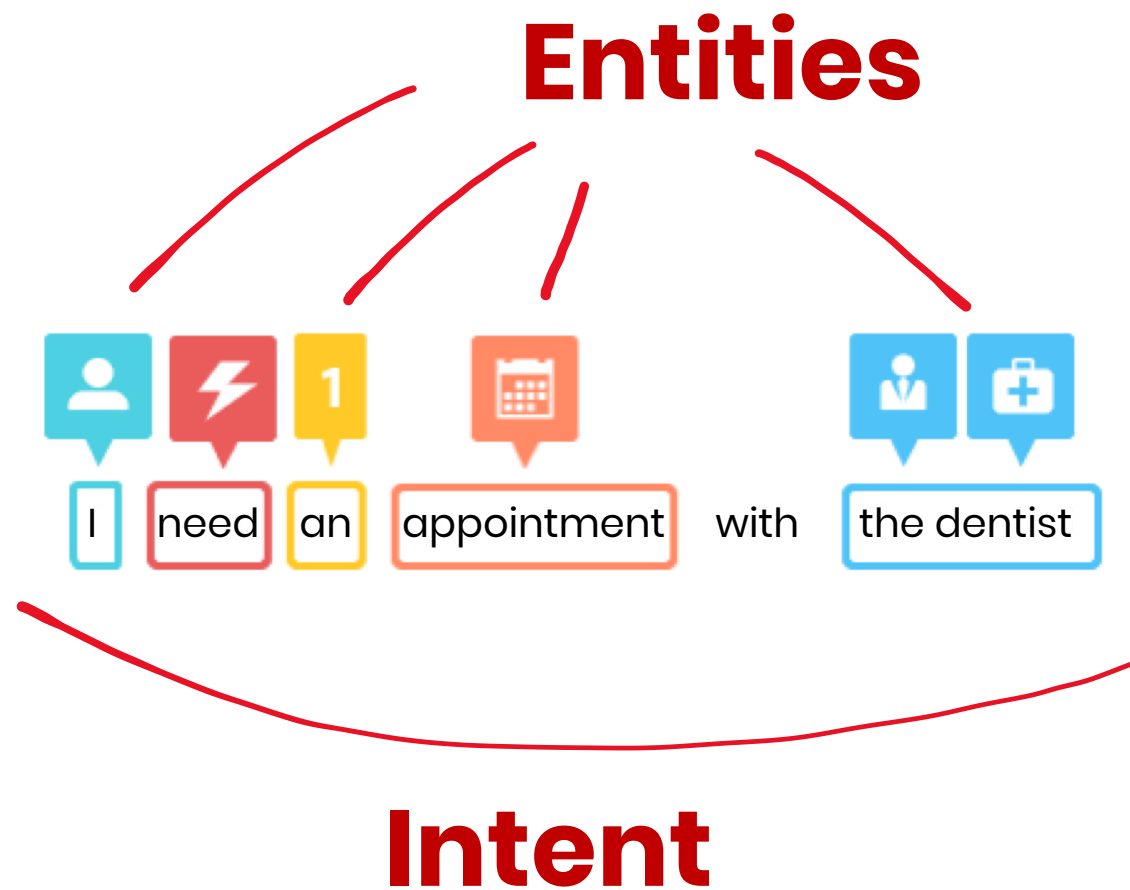
Bot Logic

- An application containing the bot's logic that is not managed by the Bot Builder as part of SAP Conversational AI
- Can be written in an arbitrary programming language, exposed as web API
- Receives the user expression and dialog state (e.g. memory) of the conversation and reacts with an appropriate response

SAP Cloud Platform

- SAP's Platform-as-a-Service (PaaS) offering for creating new applications or extending existing applications in a secure cloud computing environment managed by SAP

Intent & entities





Define intents & entities

[order-a-pizza](#) / [intents](#) / @order-a-pizza

No description provided

9 9

#NUMBER ★ 4

#PRONOUN ★ 9



+ ADD LANGUAGE

FORK

Add an expression

IMPORT A CSV FILE

You have 2 expressions suggested to enrich your intent

All

☐ I am hungry

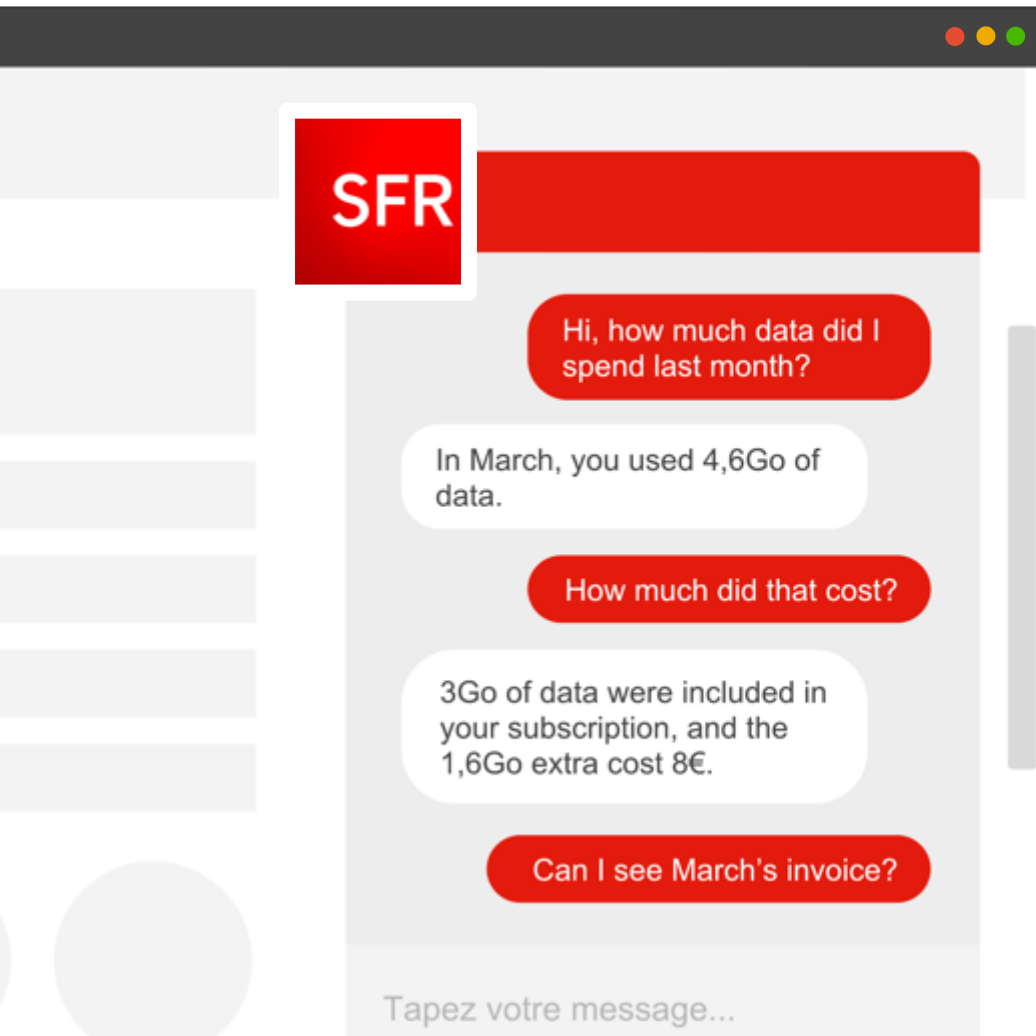
☐ I want to eat

☐ Do yo have some pizza?

☐ I would like to take a pizza

20

How chatbots are used?



Treat **customer requests**

Provide complex information through
an easy interface

Reduce the number of calls to the
client's call center

 [**Demo**](#)

Training Analytics

Training Analytics helps you to build a great dataset for your bot.

- Available for bots with at least 5 intents and at least 30 expressions per intent
- Measure the performance of your dataset
- Give you insights on how to improve your intent classification and your custom entity detection



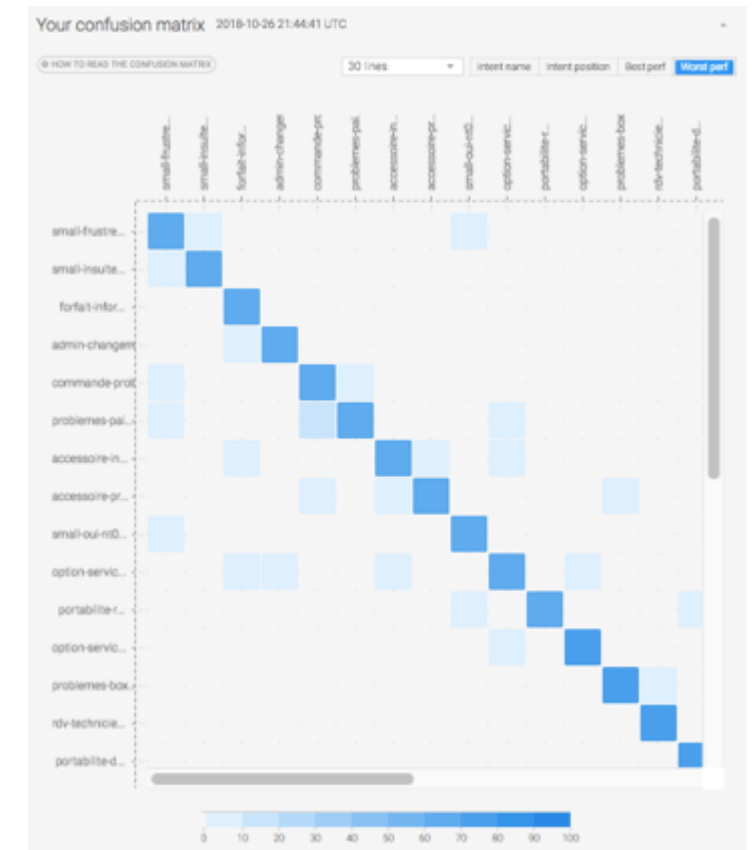
Your detailed benchmark 2018-10-26 21:44:41 UTC [normalized to](#)

☒ Bot training data ☐ Validation data file

WHAT DO THE COLUMNS MEAN?

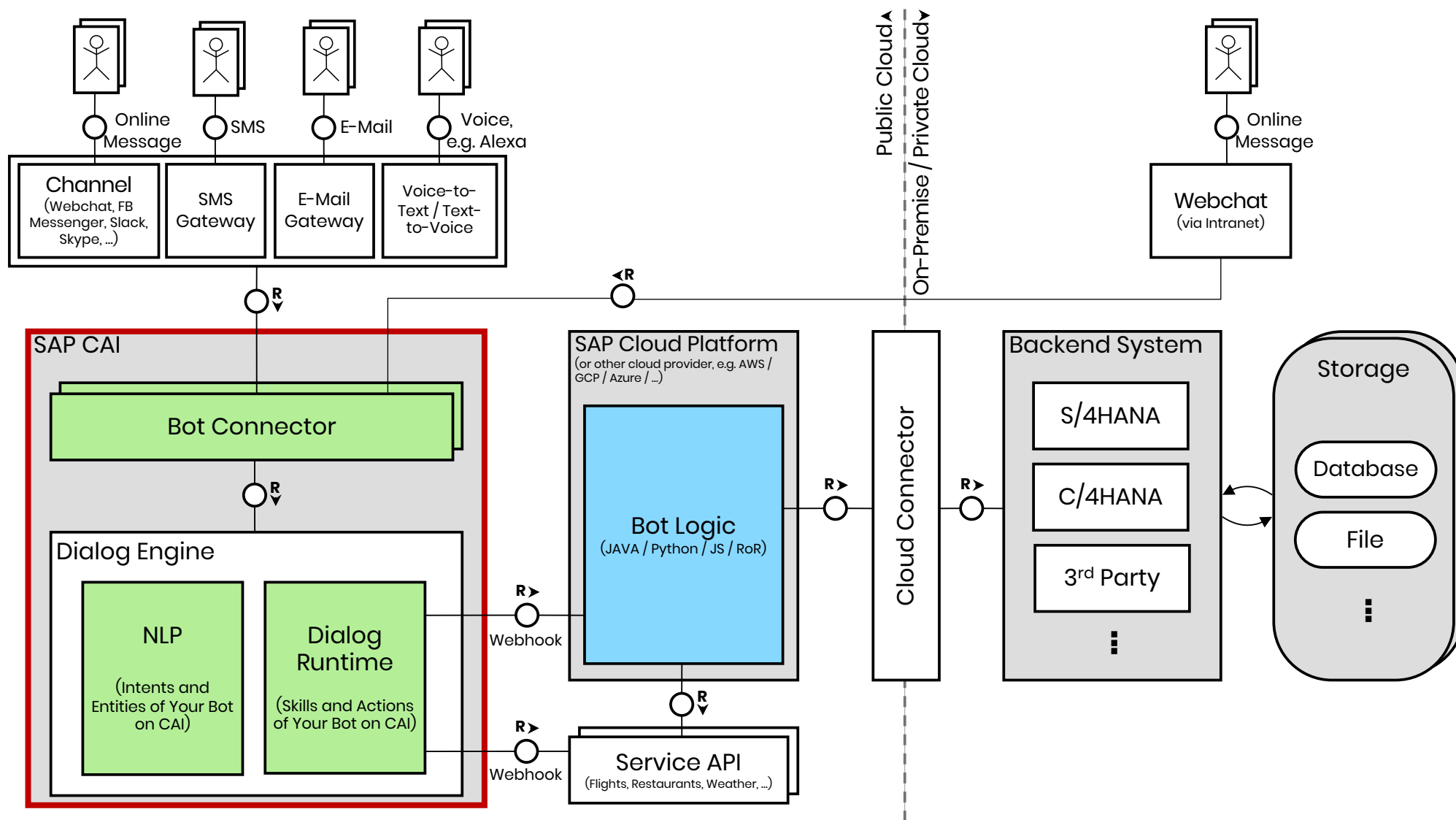
Intent	Accuracy	Precision	Recall	F1 score	Size	Ranking
fusion-facturation-multiligne-relatif-rs0042	0.83	0.90	0.83	0.86	54	0.00
ping-test-system-status	1.00	1.00	1.00	1.00	11	0.00
facturation-sepa-rs0050	0.95	0.97	0.95	0.96	113	0.00
facturation-echelonnage-rs0040	0.92	0.81	0.92	0.85	143	0.00
demenagement-declaration-rs0031	0.86	0.94	0.86	0.89	127	0.00
facturation-obtenir-facture-rs0043	0.88	0.93	0.88	0.90	251	0.00
small-presentation-rs0175	0.90	0.85	0.90	0.88	225	0.00
facturation-relance-rs0045	0.96	0.78	0.96	0.86	77	0.00
average all intents combined, acc & F1 & A6	0.91	0.91	0.91	0.91	1.00	0.00

[View more](#)





Architecture



Some links

Documentation: <https://cai.tools.sap/docs/>

API: <https://cai.tools.sap/docs/api-reference/>

Tutorials: <https://cai.tools.sap/blog/category/tutorial/>

Technical support: <https://answers.sap.com/tags/73555000100800001301>

 **Your turn!**

 [joeybranner](#) / [ml-hackathon-copenhagen-2019](#) Private

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3

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bit.ly/2kW9wZx