

ORACLE

Getting started with Conversational AI

Program Agenda

- 1 What is Conversational AI
- 2 Chatbot vs Digital Assistant
- 3 Linguistic model concepts
- 4 Conversation design

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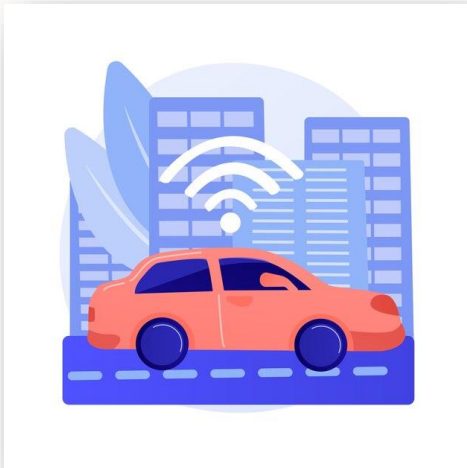
Artificial Intelligence refers to machines that mimic human intelligence to perform tasks and can iteratively improve themselves based on the information they collect.

What is Artificial Intelligence ?

Objects detection



Self driving cars



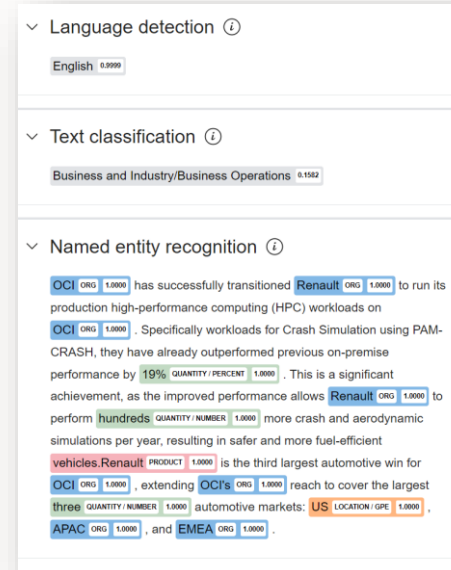
Receipt extraction



Search engines



Language



Face recognition



What is Artificial Intelligence ?

” Natural Language Processing (NLP) tries to understand text or voice, in the same way that humans do!

Language detection ⓘ

English 0.9999

Text classification ⓘ

Business and Industry/Business Operations 0.1582

Named entity recognition ⓘ

OCI ORG 1.0000 has successfully transitioned Renault ORG 1.0000 to run its production high-performance computing (HPC) workloads on OCI ORG 1.0000 . Specifically workloads for Crash Simulation using PAM-CRASH, they have already outperformed previous on-premise performance by 19% QUANTITY / PERCENT 1.0000 . This is a significant achievement, as the improved performance allows Renault ORG 1.0000 to perform hundreds QUANTITY / NUMBER 1.0000 more crash and aerodynamic simulations per year, resulting in safer and more fuel-efficient vehicles. Renault PRODUCT 1.0000 is the third largest automotive win for OCI ORG 1.0000 , extending OCI's ORG 1.0000 reach to cover the largest three QUANTITY / NUMBER 1.0000 automotive markets: US LOCATION / GPE 1.0000 , APAC ORG 1.0000 , and EMEA ORG 1.0000 .



What is Conversational AI

” Conversational AI is when we apply AI in a conversational interaction with a human.

Conversational AI is a subset of AI that focuses on a conversational interaction with a human.

Chatbots, digital assistants, virtual assistants are all forms of conversational AI.

It uses subdomains of AI, like NLP, Machine and Deep Learning, to create a conversational experience.

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Chatbot vs Digital Assistant

Chatbot

- Single purpose
- User initiated
- Simple interactions

Digital Assistant

- A Digital Assistant recommends or completes tasks beyond simple conversations
- Multipurpose
- Intelligent routing
- Complex cross-domain interactions
- Contextually aware
- Proactive, can initiate interactions

What does a waiter have in common with a digital assistant?

Welcomes guests and asks them what they want

Makes recommendations

Asks for needed information

Communicates with the backend services

- kitchen and bar

Understands context

- " Knows what you like if you are a regular customer "

Proactive

- Wine finished: "Would you like more?"



Is Artificial Intelligence all we need?

” Artificial Intelligence and machine learning alone do not make a digital assistant

- Application security
- Backend integration
- Conversation analytics
- Conversation design
- FAQ integration
- Human agent integration
- Model training
- Multi channel support and integration
- Multi language support
- Structured data input
- Quality testing for utterances and conversations
- Utterance sourcing

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What is an intent?

Find a slot for a zoom meeting with Steve Bennett on Friday at 10 am


What is an intent?

something

somebody

sometime

Find a slot for a ~~zoom meeting~~ with ~~Steve Bennett~~ on ~~Friday~~ at ~~10 am~~



Intent
User wants to set up
a meeting

What is an intent?

” An intent maps to a known use case. It's the entry point for a conversation

An intent is resolved for a set of related messages that a machine has previously seen during training or sees for the first time

In natural language processing, intents are mapped to conversations a user wants to have

Identifying the intent is the first step in conversational AI

What are utterances?

Different ways to set up a meeting

Send a calendar invite for Wednesday 11 am to 12 pm for a meeting

For January 12 2022 at 10 am for 2 hours create an invite for a zoom

I want to meet Sarah Pa from 9 am to 2 pm to discuss sales forecast

Invite Ben Sanders for annual 101 on Monday at 2 pm for 45 minutes

I am meeting Mariah on Feb 10 2022 on zoom at 3 pm for 1 ½ hours

Block my calendar on June 1 2022 from 8 am – 4 pm for an offsite

What are utterances?

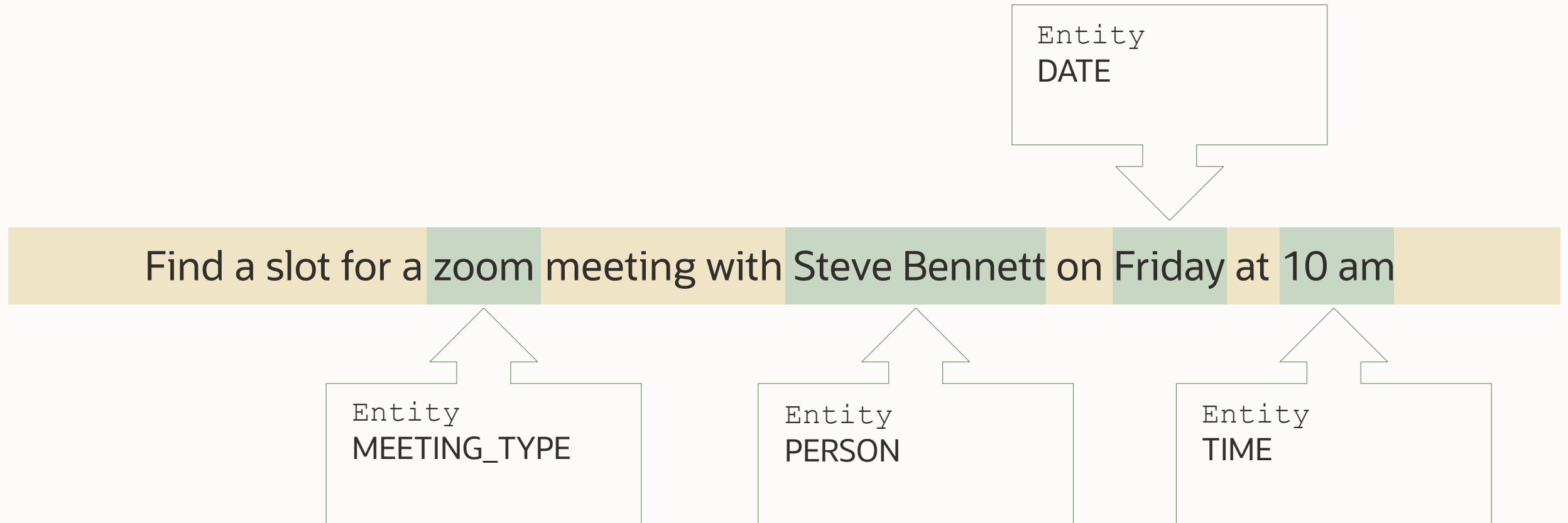
” Utterances are sample messages of how users would address an intent

Represent real user messages

Must be curated to avoid bias or blurring

Intents should be neither undertrained nor overtrained

What is an entity?



What is an entity?

” Extracts information from user messages

Can be

- real-world objects like *person, order, product, location, date, account etc.*
- business domain specific like *products, merchants, etc.*

Have a name that is unique within the chatbot, as well as a type and optional properties to set

May be referenced by multiple values (synonyms)

NER (named entity extraction) is the process of finding entity values in a user message

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Conversation design

” Conversation design is the practice of making AI assistants more helpful and natural when they talk to humans

Makes the conversation engaging

Reduces the chances of ambiguity

Guides the user in turn taking and expectations

Strategies for dealing with "falling off the happy path"

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