

Guani: Chatbot for booking a Hotel Room | Development Phase

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Course: Project AI Use case
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Topics

DIAGRAM AND ARCHITECTURE

DATABASE

OPTIMIZATION

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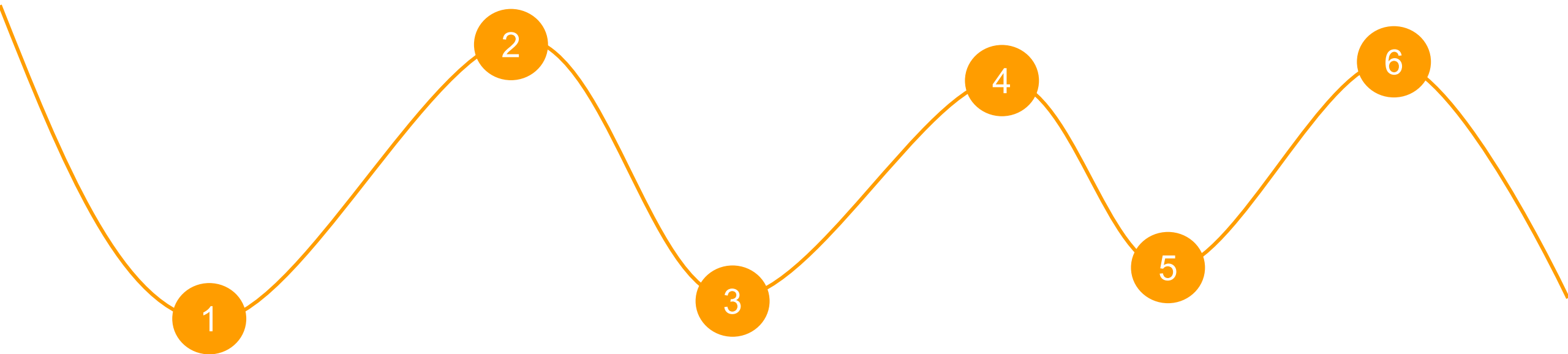
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FRAMEWORKS AND SETUP

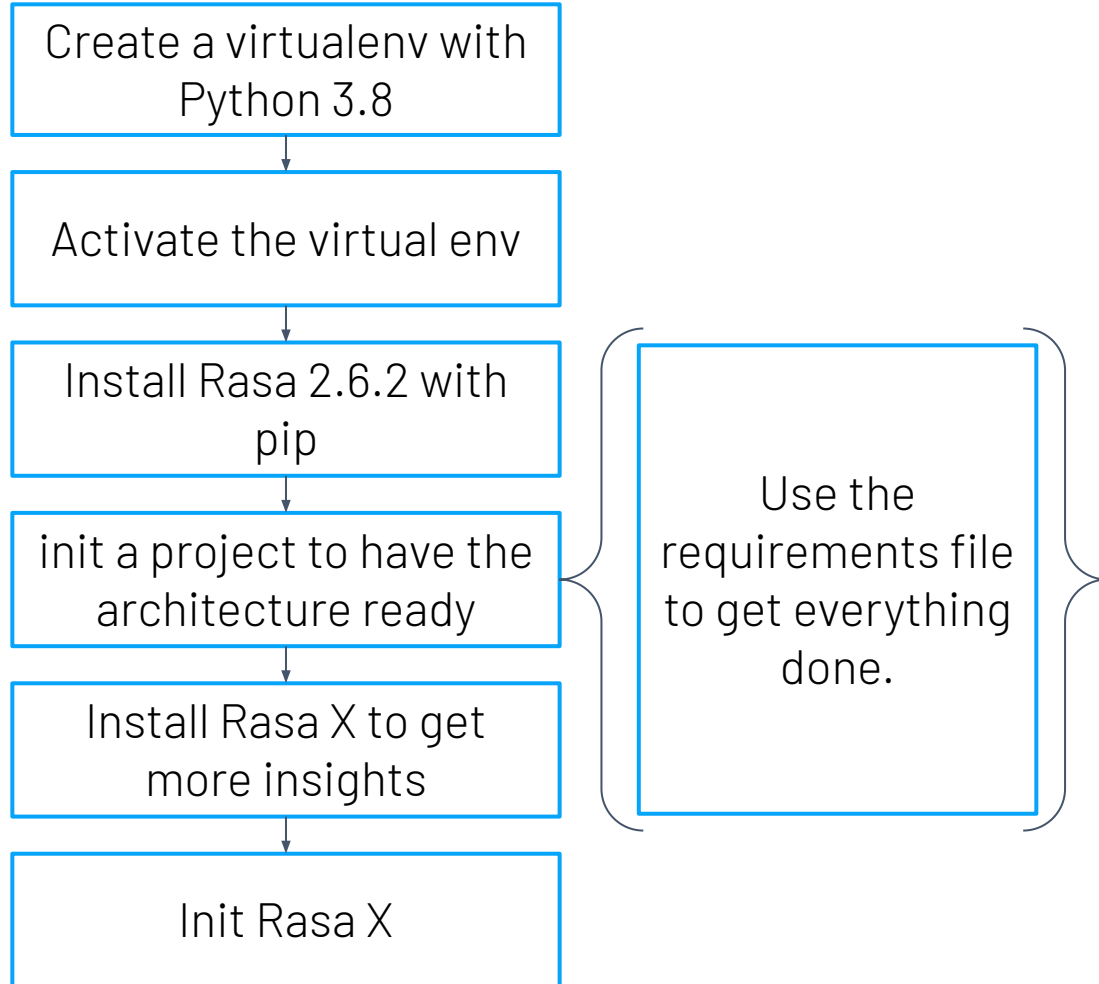
CODE

TRAIN (METRICS)



Frameworks and setup

Configure all the process



```
virtualenv env -p python3.8
source env/bin/activate
pip install -r requirements.txt
rasa x
```

```
virtualenv env -p python3.8
source env/bin/activate
pip install rasa==2.6.2
pip3 install rasa-x==0.40.0 --extra-index-url https://pypi.rasa.com/simple
pip install sanic-jwt==1.6.0
rasa x
```

Environment

Linux
Ubuntu 20.04
Python 3.8
Rasa

Diagram and Architecture

"How the chatbot works internally"

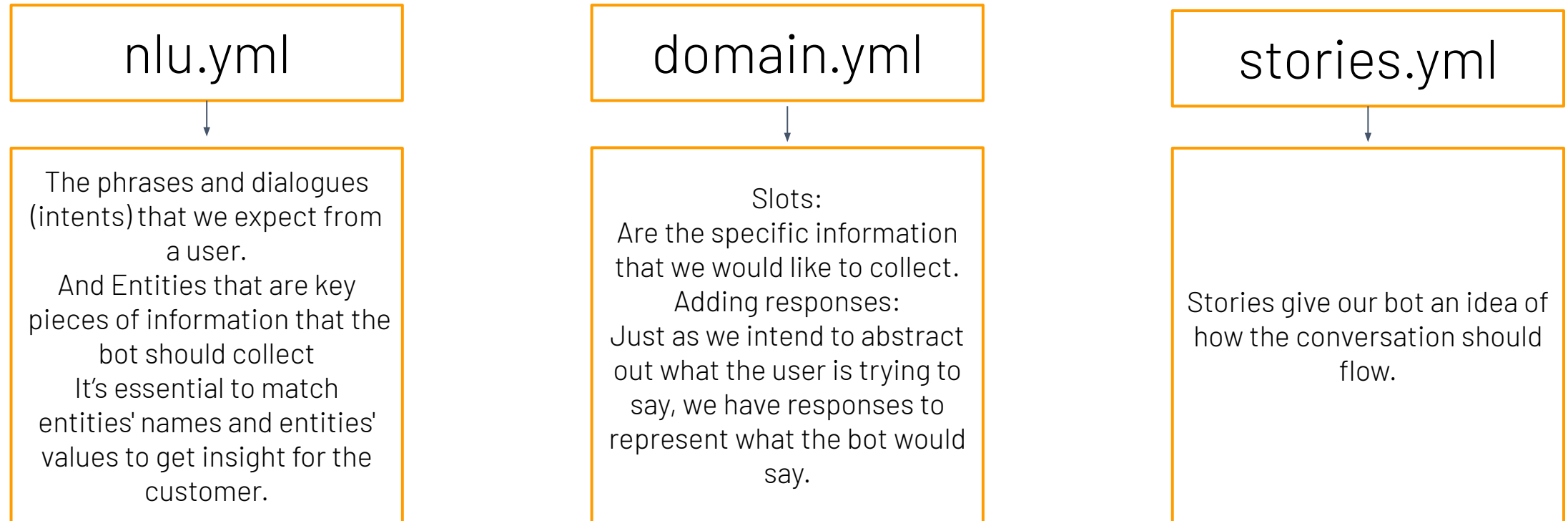
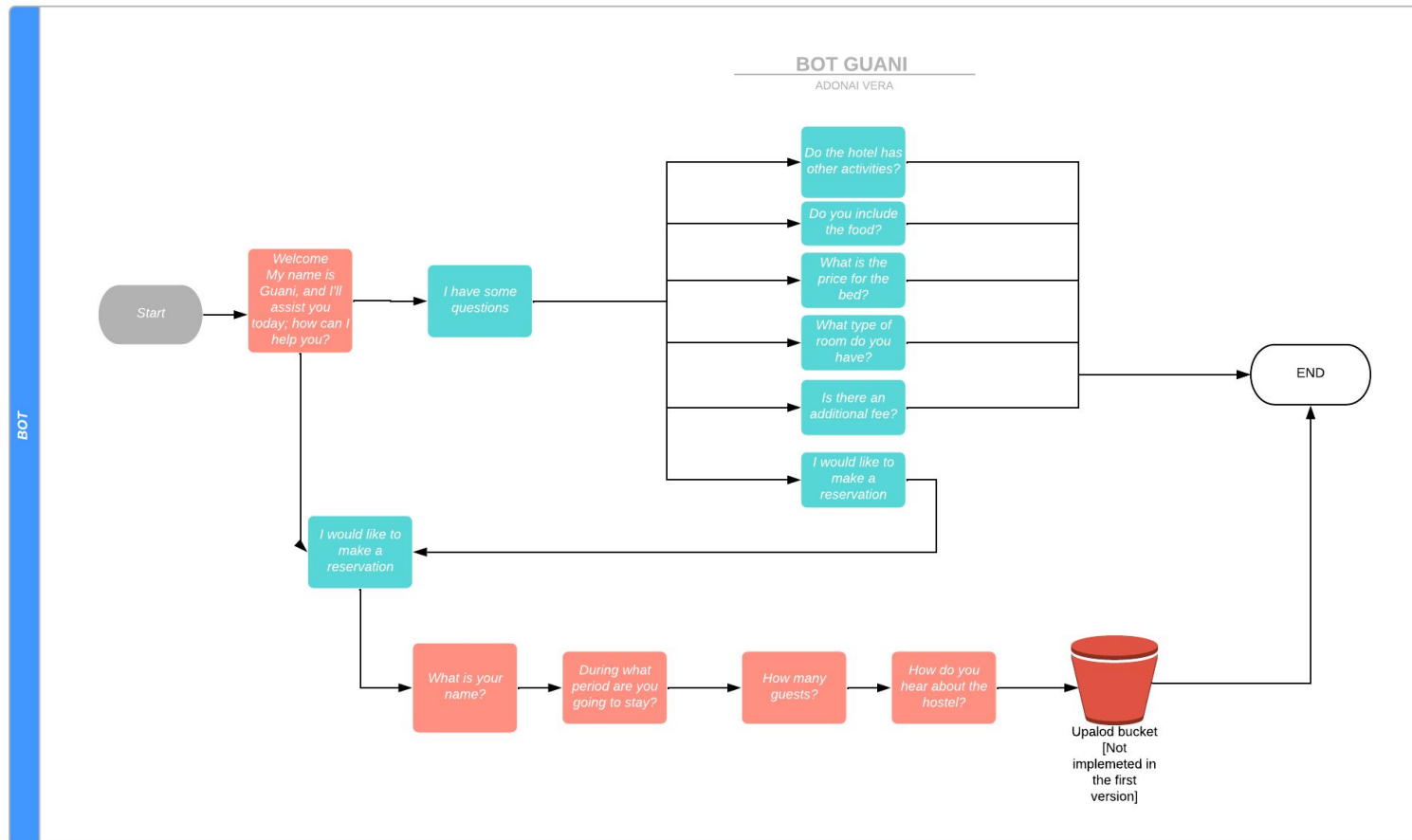


Diagram and Architecture



“How the chatbot works internally



I applied the same diagram that I proposed in the conception phase but now using the tools that Rasa provided me:

- nlu.yml
- domain.yml
- stories.yml

Database



“How the chatbot works internally

NLU Training Data			Training data	Regex & Lookup	Synonyms	不	↓
Search 140 examples...							
Sentence		Intent					
Thank you, i have a couple of questions		questions					
Guani I have a couple of questions		questions					
I have a question		questions					
I have a doubt		questions					
Can I ask you something		questions					
I have a couple of questions		questions					
Do you have an extra fee?		fee					
is there additional fees?		fee					
Do you have a fee per night ?		fee					
Do I have to pay when I arrive to the hotel?		fee					

In the database, there is a list with more than 140 sentences and with the respective intents. All the database will be in the finalization phase.

Database

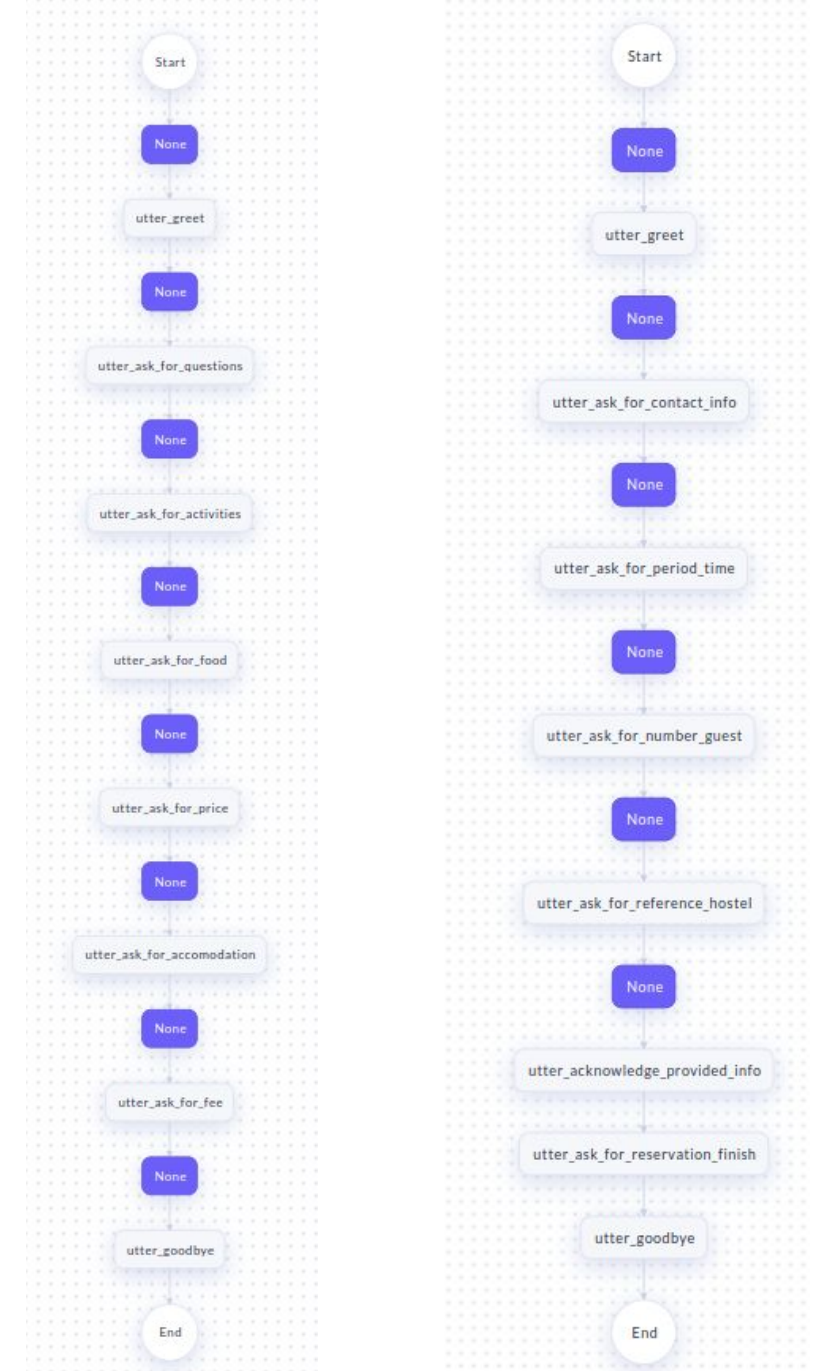


"How the chatbot works internally"

Responses		Response variants for utter_ask_for_activities	
utter_acknowledge_provided_info	1	Yes {name} we have salsa night on thursday and karaoke on Friday. Besides, you can enjoy the bar open from 11 pm to 3 am	
utter_ask_for_accomodation	1		
utter_ask_for_activities	1		
utter_ask_for_contact_info	1		
utter_ask_for_fee	1		
utter_ask_for_food	1		
utter ask for number guest	1		

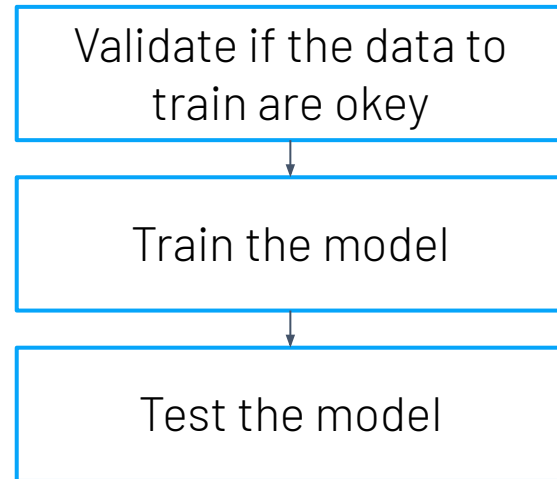
We created the response to each topic that the user could ask. Besides, we add two stories: Make a reservation | Solve some questions. To show the flow that the user can take.

We are adding more info about the optimization process.

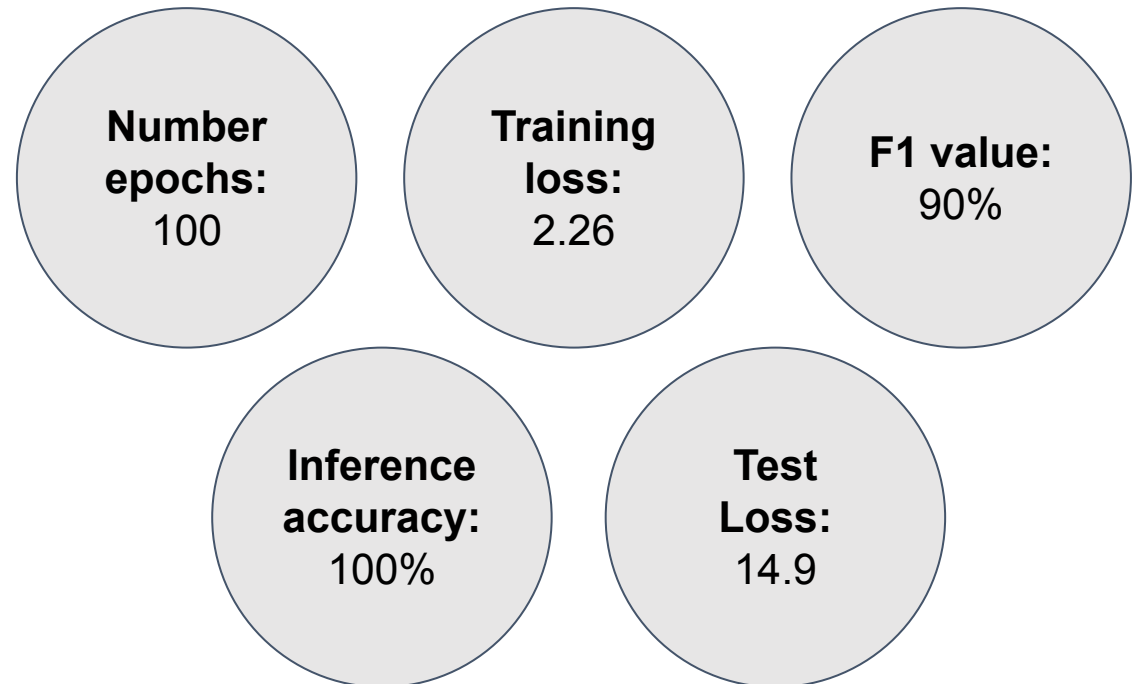


Train models

Train the model from cmd or from rasa x



Metrics

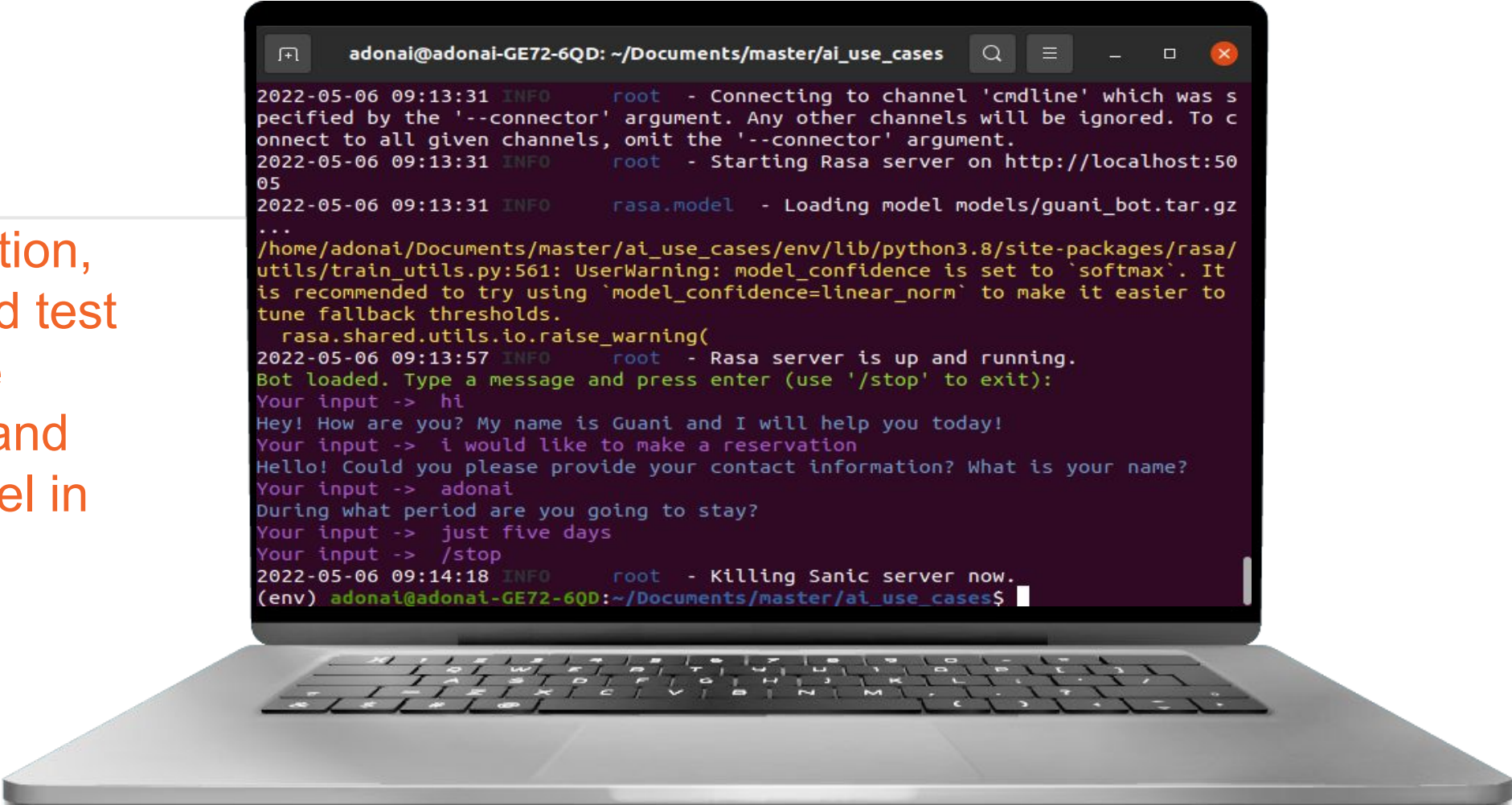


```
rasa data validate
rasa train --fixed-model-name guani_bot
rasa shell
```


Optimization

We test the model and re train the algorithm with more entities

For the optimization,
we use rasa x and test
with multiple
conversations and
re-train the model in
the service.



```
adonai@adonai-GE72-6QD: ~/Documents/master/ai_use_cases
2022-05-06 09:13:31 INFO      root - Connecting to channel 'cmdline' which was s
pecified by the '--connector' argument. Any other channels will be ignored. To c
onnect to all given channels, omit the '--connector' argument.
2022-05-06 09:13:31 INFO      root - Starting Rasa server on http://localhost:50
05
2022-05-06 09:13:31 INFO      rasa.model - Loading model models/guani_bot.tar.gz
...
/home/adonai/Documents/master/ai_use_cases/env/lib/python3.8/site-packages/rasa/
utils/train_utils.py:561: UserWarning: model_confidence is set to `softmax`. It
is recommended to try using `model_confidence=linear_norm` to make it easier to
tune fallback thresholds.
  rasa.shared.utils.io.raise_warning(
2022-05-06 09:13:57 INFO      root - Rasa server is up and running.
Bot loaded. Type a message and press enter (use '/stop' to exit):
Your input -> hi
Hey! How are you? My name is Guani and I will help you today!
Your input -> i would like to make a reservation
Hello! Could you please provide your contact information? What is your name?
Your input -> adonai
During what period are you going to stay?
Your input -> just five days
Your input -> /stop
2022-05-06 09:14:18 INFO      root - Killing Sanic server now.
(env) adonai@adonai-GE72-6QD:~/Documents/master/ai_use_cases$
```

Results and next step

We test the model and re train the algorithm with more entities

Talk to your bot (Interactive Learning)

Conversation session started on 6 May 2022

action_session_start (1.0)

action_listen

utter_greet (1.0)

Hey! How are you? My name is Guani and I will help you today!

action_listen (1.0)

Guani I have a couple of questions

utter_ask_for_questions (1.0)

I'll try to solve your questions

action_listen (1.0)

What is the price for a bed ?

action_default_fallback (0.30)

rewind

action_listen (1.0)

Start typing a message...

Story till now

Story Test story

version: "2.0"

stories:

- story: Story from Conversation ID 737752bc6ff64e2691ca1e22e0d07de6

steps:

- intent: greet
- action: utter_greet
- intent: questions
- action: utter_ask_for_questions
- intent: price
- action: action_default_fallback

Clear Save Story

Slots

No slots

We deploy the chatbot locally and generate a URL that the user can test, and we created a channel with NGROK to try the chatbot for three days; the steps will be in the finalization phase.

Next steps

Keep testing the algorithm with new users and improve the database.

Test Guani here:

[Guani test here](#)

THANK YOU
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