

Novo Home Assistant

252 Term Project



Ryan Cummings
Nov 30, 2021
CMPE 252

Motivation for Novo

Unique home assistant that goes beyond Alexa or Google Home's capabilities.
Specifically for use in my household.

Examples:

- 1) Adjusting Pool Temperature(s)
- 2) Turning Crypto miners on / off
- 3) Feeding the dogs
- 4) Starting / Stopping Robot Vacuum

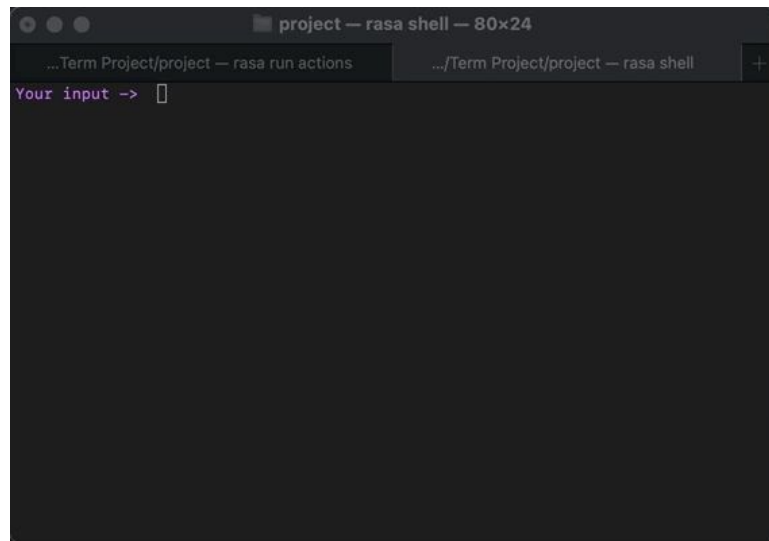
Conversation Flows Implemented

41 intents

```
4  examples: |
5      - Hi!
6      - Hey!
7      - Hello
8      - Hi
9      - What's up
10     - How are you?
11     - How are you
12     - How you doing
13     - Hey
14     - Hellop
15 - intent: robot_joke
16   examples: |
17     - Are you a robot?
18     - Are you a robot
19     - Are you a human
20     - robot
21     - human
22     - Are you a bot?
23     - Are you a human?
24 - intent: alarm_system
25   examples: |
```

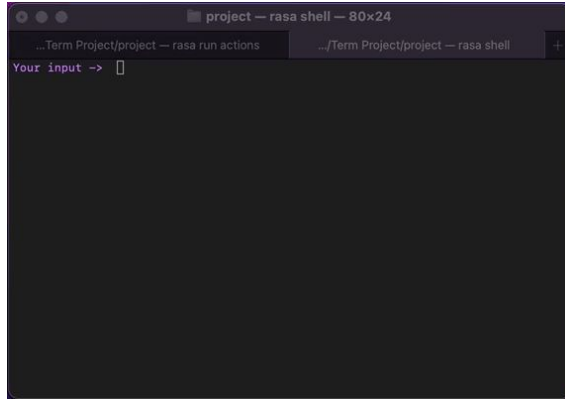


4 Multi-Turn convos

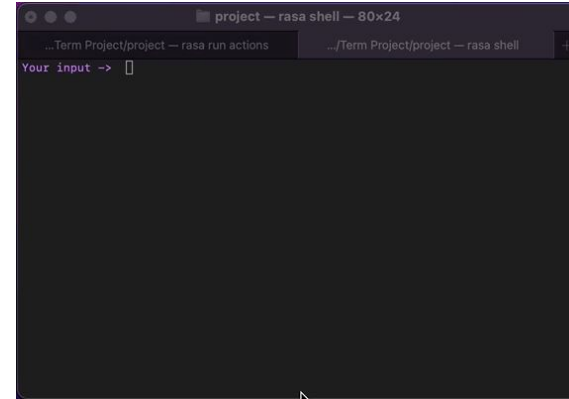


Conversation Flows Implemented (2)

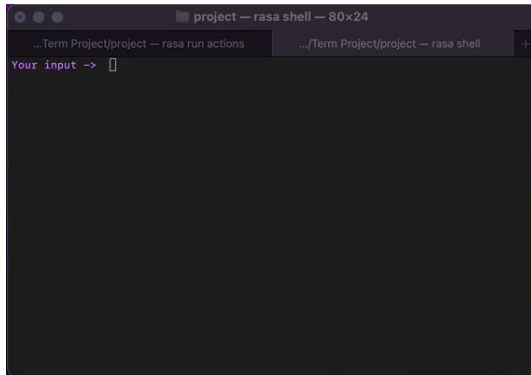
Crypto



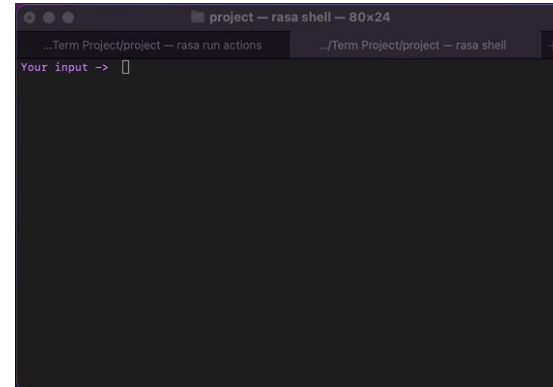
Robot Vacuum



Drive Time





Pool



Struggles

RASA Docs

Introduction

Rasa Playground

Building Assistants

Installation

Migrate From (beta)

Command Line Interface

Best Practices

Conversation Patterns

Intents

[Your input -> lights on
Turning lights on!
[Your input -> Lights on
The lights are now off.

Domain

```
version: '2.0'
config:
  store_entities_as_slots: true
session_config:
  session_expiration_time: 60
  carry_over_slots_to_new_session: true
intents:
- greet:
  use_entities: true
- inform:
  use_entities: true
- subscribe:
  use_entities: true
- robot_joke:
  use_entities: true
- alarm_system:
  use_entities: true
- pool:
  use_entities: true
- blinds_open:
  use_entities: true
- blinds_closed:
  use_entities: true
- lights_on:
  use_entities: true
- lights off:
```

Insights / Lessons Learned

Insights:

- 1) Spend more time watching the videos
- 2) Dive deeper into Custom Actions and their capabilities
- 3) See about adjusting the Config.yml file that could potentially lead to better training and testing errors

Lessons Learned:

- 1) Can use Rasa Interactive to train model rather than writing it by hand
- 2) Using Forms / Slots and Storing the info using Custom Actions
- 3) Adding more training data (NLU “examples”) had a huge impact on how accurate my model was/is.

Live Demo