

RASA Powered Personal Interest's ChatBot

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One stop solution for my routine searches – updates on News and Cricket



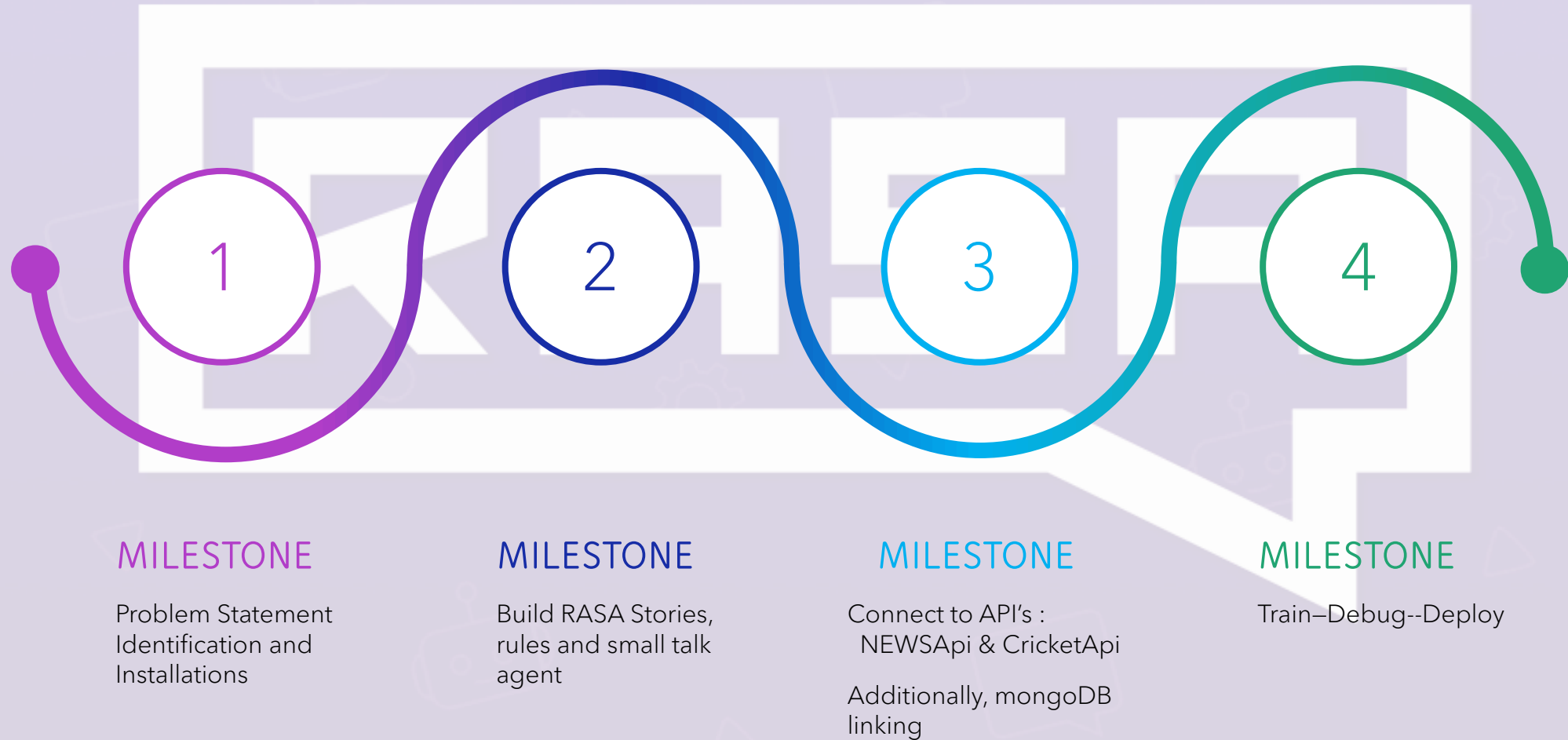
FAQ on basic astronomy terms and key players



To try and understand the scope and limitations of State-of-the-Art
Conversational AI: rasa

Motivation:

Mybot Development Phases



Features:

Ability to do a conversational small talk

API calls to fetch latest top news through

NewsAPI & CricketAPI

Limited multi-turn capability

Responses that contain information about basic astronomy and space

Obtain Information from user to Subscribe to newsletters

Publish the data to secured mongoDB server

Integration and Deployment on Slack

Intents

```
EXPLORER  ...  stories.yml  newsfetch.py  ! domain.yml  ! nlu.yml  !  
MYBOT  [?]  [?]  [?]  [?]  
! _pycache_  
> .rasa  
> actions  
> bot  
v data  
! nlu.yml  
! nluexported.yml  
! rules.yml  
! stories.yml  
! storiesexported.yml  
> models  
> MyChatBot  
> Screenshots  
> tests  
◆ .gitignore  
! config.yml  
! credentials.yml  
! domainexportedn.yml  
! domain.yml  
! endpoints.yml  
◇ graph.html  
◆ newsfetch.py  
① README.md  
! domain.yml  
1 version: "3.1"  
2  
3 intents:  
4 - greet  
5 - goodbye  
6 - recent_matches  
7 - upcoming_matches  
8 - news  
9 - affirm  
10 - deny  
11 - froze  
12 - mood_great  
13 - mood_unhappy  
14 - intro  
15 - bot_challenge  
16 - out_of_scope  
17 - agent_age  
18 - agent_annoying  
19 - agent_answer_my_question  
20 - agent_bad  
21 - agent_busy  
22 - agent_chatbot  
23 - agent_funny  
24 - agent_origin  
25 - agent_residence  
26 - agent_there  
27 - appreciate_thank_you
```

API calls.

```
class ActionGetUpcomingMatches(Action):  
    def name(self):  
        return 'action_get_upcoming_matches'  
  
    def run(self, dispatcher, tracker, domain):  
        res = requests.get(CRIC_API_URL + "matches" + "?apikey=" + CRIC_API_KEY + "&offset=0")  
        if res.status_code == 200:  
            matches_data = res.json()["data"]  
            matches_data.sort(key=lambda x: x["date"], reverse=True)  
            team_name = tracker.get_slot('team')  
            if team_name is None:  
                dispatcher.utter_message("Team not set. Showing the results for all the upcoming matches.")  
                team_name = "All Teams"  
            else:  
                matches_data = [x for x in matches_data if team_name in x["teams"]]  
            if len(matches_data):  
                dispatcher.utter_message(f"Showing the upcoming matches {(len(matches_data))} for team: {team_name}\n")  
                msg = ''  
                for index, match in enumerate(matches_data):  
                    msg=msg + str(index+1) + match["teams"] + "vs" + match["date"] + "h" + match["time"] + "match between " + match["team"] + " and " + match["opponent"] + "\n"
```

```
! domain.yml  
246 utter_ask_email:  
247   - text: Please type in your email address.  
248 utter_ask_frequency:  
249   - text: How often do you want to receive emails regarding this.  
250 utter_subscribed:  
251   - text: Thank you for subscribing to the newsletter, you will receive the same at (email), Please wait and watch  
252 utter_posted_successfullyto_mongodb:  
253   - text: Subscription details posted to the MongoDB, please continue to explore while you wait for the newsletter.  
254  
255 actions:  
256 - action_get_recent_matches  
257 - action_get_upcoming_matches  
258 - action_news_fetcher  
259 - action_info_astronomy  
260 - action_info_space  
261 - action_info_telescopes  
262 - action_info_planets  
263 - action_info_mission_at_isro  
264 - action_info_mission_at_nasa  
265 - action_info_black_hole  
266 - action_info_star_and_galaxies  
267 - action_new_letter  
268 session_config:  
269   session_expiration_time: 60  
270   carry_over_slots_to_new_session: true  
271
```

Responses &

Custom Actions

Multi turn Conversation Stories

```
101 - story: info telescopes  
102 steps:  
103   - intent: greet  
104   - action: utter_greet  
105   - intent: info_telescopes  
106   - action: action_info_telescopes  
107   - action: utter_Should_I_extend  
108   - intent: affirm  
109   - action: action_info_mission_at_nasa  
110   - action: utter_Should_I_extend  
111   - intent: affirm  
112   - action: action_info_black_hole  
113  
114 - story: info telescopes  
115 steps:  
116   - intent: greet  
117   - action: utter_greet  
118   - intent: info_telescopes  
119   - action: action_info_telescopes  
120   - action: utter_Should_I_extend  
121   - intent: affirm  
122   - action: action_info_mission_at_nasa  
123   - action: utter_Should_I_extend  
124   - intent: deny
```

```
--  
84 - intent: info_astronomy  
85 examples: |  
86   - what is astronomy?  
87   - define astronomy  
88   - How does astronomy work?  
89   - what is astrophysics?  
90   - astronomy  
91   - who give the name astronomy?  
92   - difference between astrophysics and astronomy?  
93   - what we study in astronomy?  
94  
95 - intent: info_space  
96 examples: |  
97   - what is space?  
98   - space  
99   - define space?  
100   - describe space?  
101   - Does sound travel faster in space?  
102   - what is astronauts?  
103   - where does space begin?  
104   - where does space ends?  
105   - what does space smell like?  
106   - how can someone alive in space?
```

Intent Identification

```
- rule: Introduce yourself  
steps:  
- intent: intro  
- action: utter_intro  
- action: utter_greetings_how_are_you  
  
- rule: Say goodbye anytime the user says goodbye  
steps:  
- intent: goodbye  
- action: utter_goodbye  
  
- rule: Say 'I am a bot' anytime the user challenges  
steps:  
- intent: bot_challenge  
- action: utter_iamabot  
- action: utter_bot_name  
  
- rule: out-of-scope stuff  
steps:  
- intent: out_of_scope  
- action: utter_out_of_scope  
  
- rule: appreciation thank you
```

rules

Demo..

Challenges Faced:

- RASA Documentation is Inconsistent at some major technical issues.
- The Original Idea of creating very precise replies and quizzes was too big to do in time.
- RASA Interactive sessions are slow and time-consuming approach to tune a larger model.
- Finalizing on APIs of choice and usage of RASA `collectingDispatcher`

Future Scope:



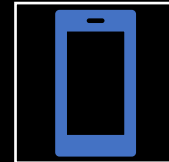
Ability to generate and
create quizzes



Create more small talk
stories and train using
better stories and policy



To Integrate News article
summarization



Deliver user friendly
responses with buttons
and media playback



Thank You..
For the Learnings and Discussions