

# Covid-19 Self Checker Chatbot

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# Agenda



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3. History of chatbots
4. Machine Learning
5. RASA Framework
6. Covid-19 Bot
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# Abstract

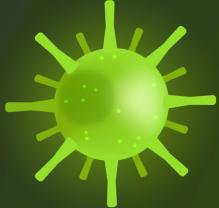




# INTRODUCTION

COVID-19 is an infectious disease caused by the recently found virus known as SARS-CoV-2 (or coronavirus). Before the outbreak originated in Wuhan, China on December 2019, there was no information about this virus

# Why we need a Bot?



## CHAT 24/7

Chat with the  
bot anytime



## n x SUPPORT

Bot can handle  
queries from  
multiple persons



## NO WAIT TIME

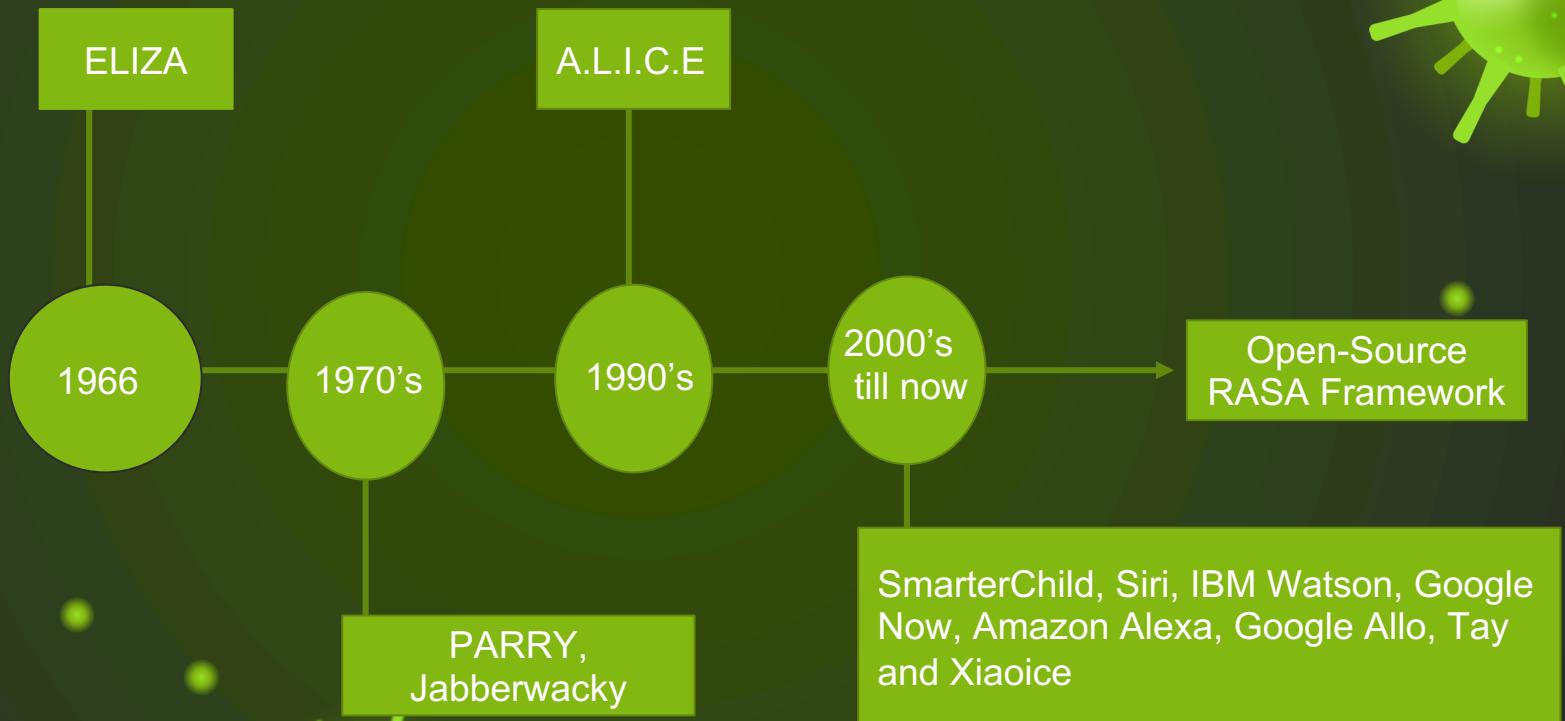
No Wait time to  
get the Answers



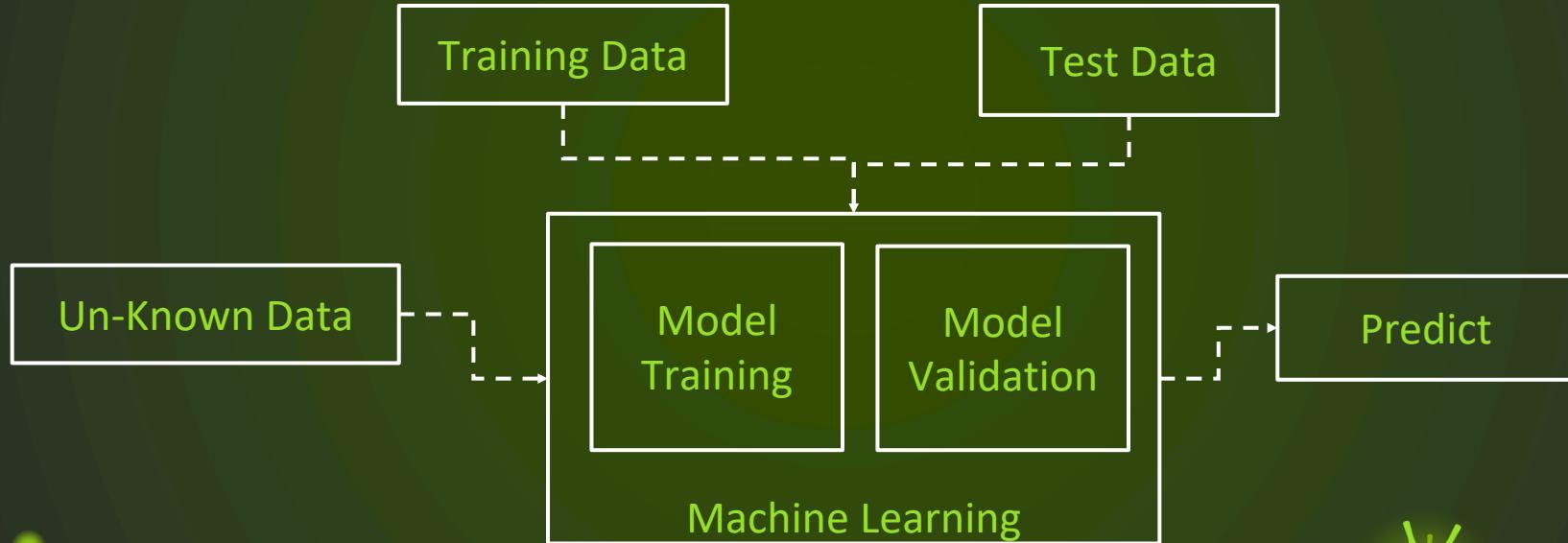
## TRAIN

Bot can be  
trained with new  
AI/ML Algorithm  
easily

# History of Bots



# Machine Learning



# RASA Framework

Rasa is an open-source ML framework for automated text and voice-based conversations. It understands messages, conversations, messaging channels and APIs.

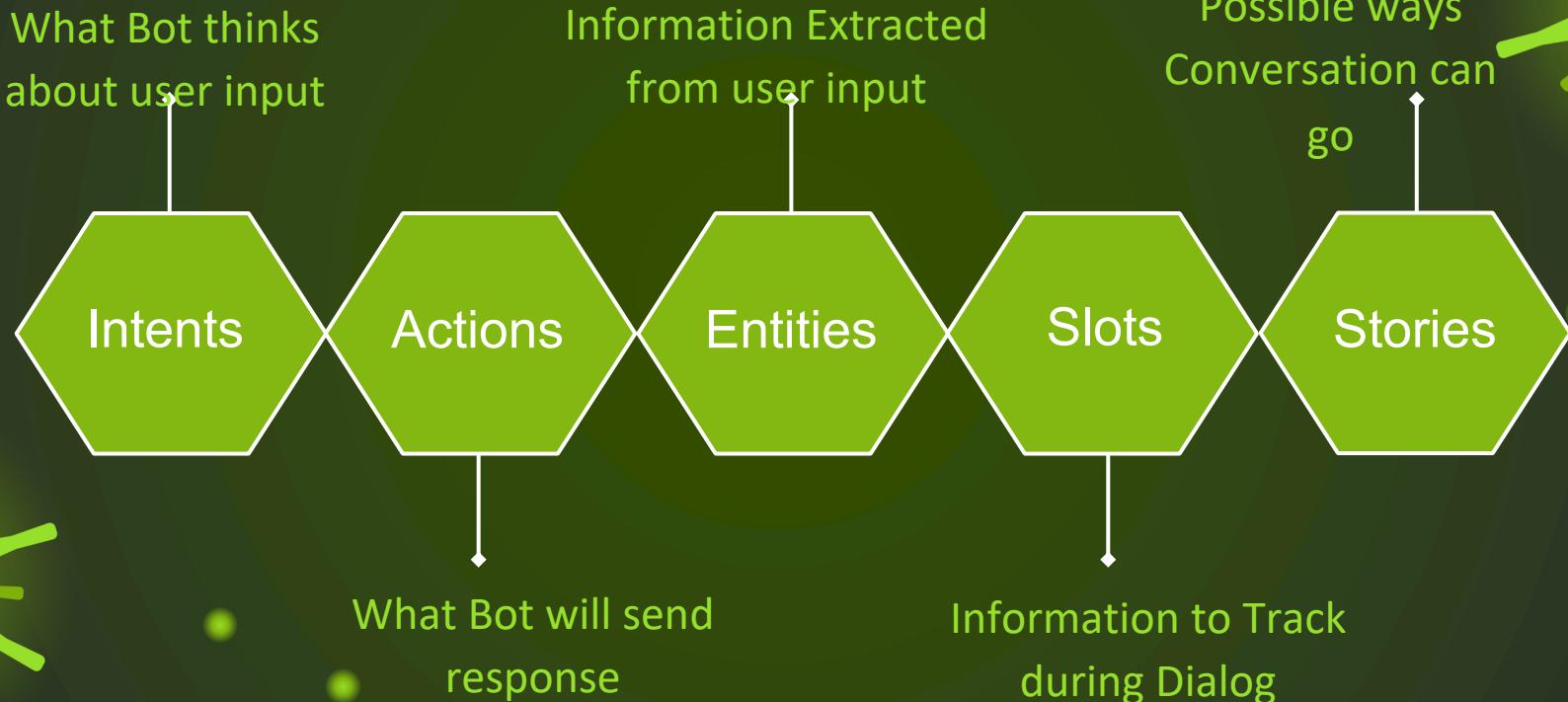
Understanding  
User messages

Rasa NLU

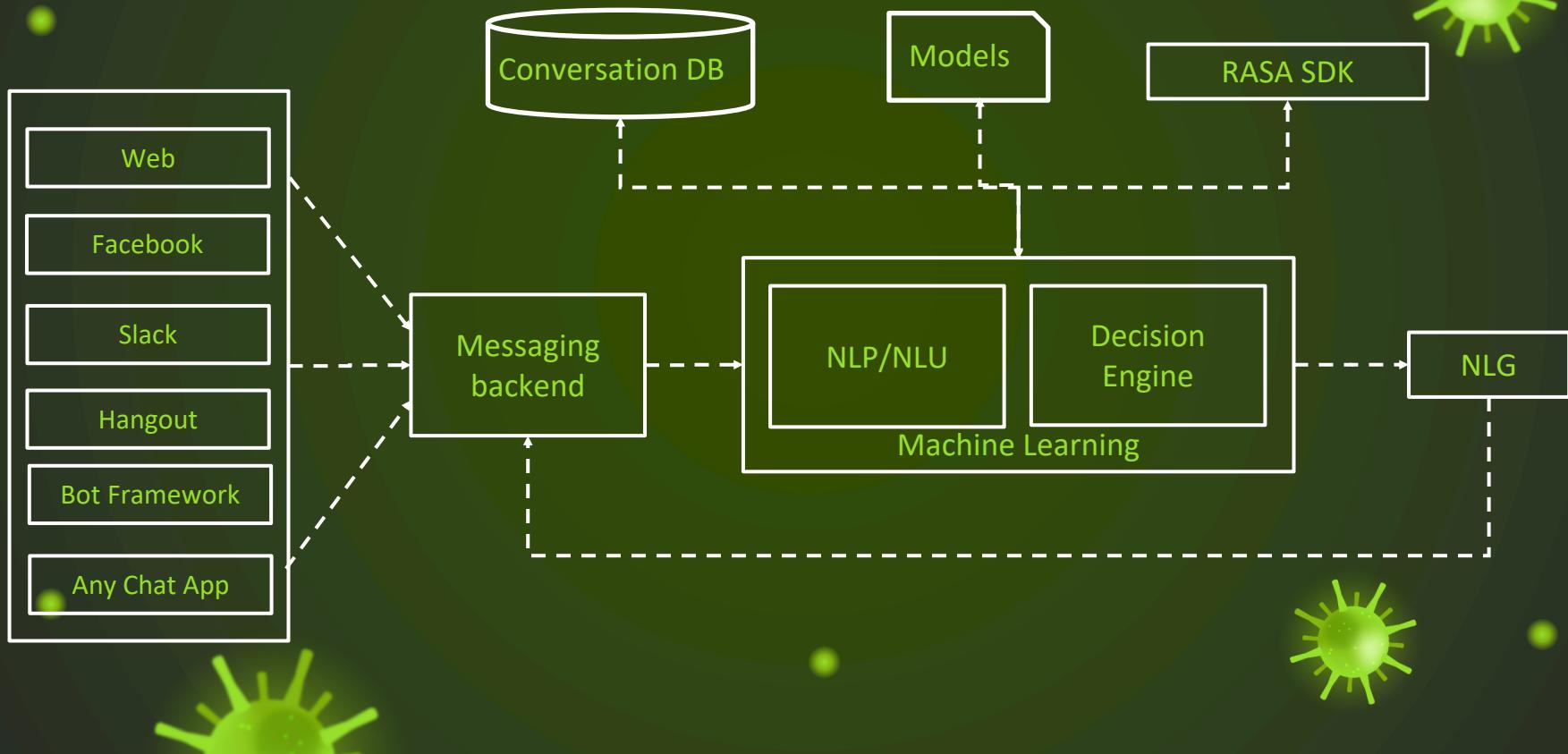
Rasa Core

Holding conversations  
and Decision Engine

# RASA Keywords



# Chat Bot using RASA



# Project Structure

`__init__.py` → An empty file that helps python find your actions

`actions.py` → Code for your custom actions

`config.yml` → Configuration of your NLU and Core models

`credentials.yml` → Details for connecting to other services

`data/nlu.md` → NLU training data

`data/stories.md` → Stories

`domain.yml` → Assistant's domain

`endpoints.yml` → Details for connecting to channels like fb messenger

`models/<timestamp>.tar.gz` → Trained model



# COVID-19 Bot Keyword Examples



- intent: greet
- examples: |
  - Hi
  - Hey!
  - Namaste

- action: utter\_sick
- text: Are you feeling Sick?
- buttons:
  - payload: Yes
  - title: Yes
  - payload: No
  - title: No

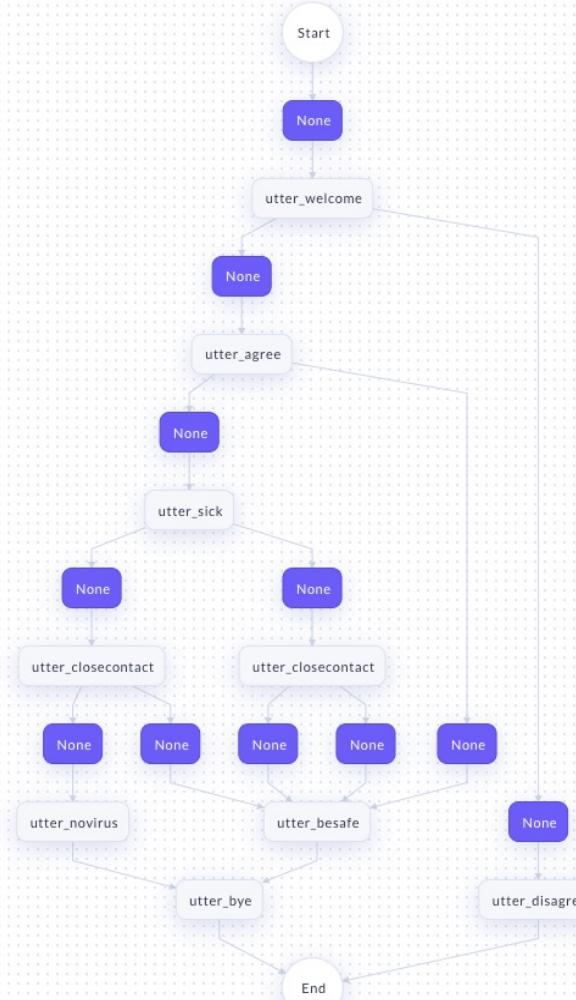
- story: Disagree Story
- steps:
  - intent: greet
  - action: utter\_welcome
  - intent: utter\_disagree
  - action: utter\_disagree



## Sample Stories of COVID-19 Bot

steps:

- intent: greet
- action: utter\_welcome
- intent: utter\_agree
- action: utter\_agree
- intent: utter\_no
- action: utter\_sick
- intent: utter\_no
- action: utter\_closecontact
- intent: utter\_no
- action: utter\_novirus
- action: utter\_bye



# Limitation of most Bots!

## Fixed Rule-based

All Rules are predefined  
and Bot just follows

## Ambiguity

Bot not able to identify  
the Context of Sentence

## Sentiment

Not able to identify  
emotion of the Subject

## Recommendatio n

Bot won't be able to  
recommend outside of  
the training

## Grammatical Errors

Not able to identify  
Language errors

## Structure

Each language is  
different in rules for  
Punctuation

## Accuracy

Sometime bots reply  
without any context

## Data Processing

No out of box Data  
processing support

## Third-Party Support

Not Much Integration  
with Social platforms or  
Language Support

## Semantics

NLP Processing

## Self-learning

No Self learning  
mechanism to Improve

## User Interface

Inadequate or poor  
Documented Interface

# Demo

**RASA**

You have been invited to have a conversation with **Bala**

Covid-19 Self-checker Chatbot Application

Hi 

Welcome to Covid-19 Self-checker tool. This is for informational purposes only. In case of any life-threatening emergency dial 911.

I Agree  I Disagree

I Agree 

People with COVID-19 have had a wide range of symptoms reported ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. Do you have any of these life-threatening symptoms?

- Pale, gray, or blue-colored skin, lips, or nail beds, depending on skin tone
- Severe and constant pain or pressure in the chest
- Extreme difficulty breathing (such as gasping for air, being unable to talk without catching your breath, severe wheezing, nostrils flaring)
- New disorientation (acting confused)
- Unconscious or very difficult to wake up

Start typing a message...   

# Conclusion

Chatbot can do lot of things with proper training the system with NLP. Bot can work 24/7 without rest. This paper discussed a possible solution for converting a FAQs to a Chatbot which can help in diagnosing the symptoms. By providing this kind of solution, we can be able to provide mental health support and emotional help to the patients around the clock. By providing such solution we can provide a better support during a Pandemic kind of solution.

# References

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# Get Vaccinated



# Thanks!

Do you have any questions?

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