

FAQ chatbot creation by using RASA

RASA introduction

- Rasa is an open-source framework for building conversational AI, including chatbots and voice assistants. It enables developers to create complex, intelligent, and context-aware chatbots that can interact with users in a natural language. Rasa provides tools for intent recognition, entity extraction, dialogue management, and connecting to external APIs, making it a comprehensive solution for developing conversational agents.

- Rasa is a framework build over and above on tensorflow.

- Rasa has two components NLU and core.

Chatbot types:-

-There are two ways to create a chatbot. The first method is to use a framework, which simplifies the process and provides various built-in functionalities. The second method is to code the chatbot from scratch. In fact, within just 15-20 lines of code, you can create a basic chatbot if you have the right knowledge and tools.

Steps to build FAQ Chatbot :-

Step 1 :- Install 'anaconda' from google ,after installing search on your search bar for 'Anaconda prompt ' it will be also automatically installed during installing anaconda

Step 2 :- After opening 'Anaconda prompt' do all this steps which i have written.

1. create a folder → Mkdir chatbot
2. Go to the folder → cd chatbot
3. Creating an environment → conda create -n chatbot python==3.8.10
4. Activate the environment → conda activate chatbot
5. Clear cache → python -m pip cache purge

(why you must clear cache → imagine that you already have two environments: one with TensorFlow 2.10 and the other with TensorFlow 2.11. Rasa will then install a version of TensorFlow according to its own requirements. The old version of TensorFlow leaves behind cache files, which can cause conflicts and prevent the installation from succeeding. Therefore, it is essential to clear the cache to avoid these issues.)

6. Upgrade pip → python -m pip install -u pip
7. Installing rasa → pip install rasa==3.0.2
8. Pip install websockets==10.0

9. Pip install protobuf==3.20
10. Start with a new project → rasa init
11. It will ask a question “? Please enter a path where the project will be created [default: current directory]” → so here you just type “.” And press enter ,that you want to create the project on this current directory
12. Train the model → rasa train
Train with fixed name → rasa train –fixed-model-name model.tar.gz
13. Use the chatbot → rasa shell
14. Evaluate the model predictions → rasa shell nlu (If you want to see how it works, how it give the answer then only code this step , otherwise after “rasa shell” it shows the chatbot)

For FAQ chatbot changes needs to be done only in 3 files

1. NLU
2. Domain
3. Stories

With config.yml file you can make changes in the NLP pipeline

Shown how to do it on cmd :-

```
(base) C:\Users\prath\OneDrive\Desktop>mkdir chatbot
(base) C:\Users\prath\OneDrive\Desktop>cd chatbot
```

```
(base) C:\Users\prath\OneDrive\Desktop\chatbot>conda create -n chatbot python==3.8.10
Retrieving notices: ..working... done
WARNING: A conda environment already exists at 'C:\Users\prath\anaconda3\envs\chatbot'
Remove existing environment (y/[n])? y

Collecting package metadata (current_repodata.json): done
Solving environment: unsuccessful attempt using repodata from current_repodata.json, retrying with next repodata source.
Collecting package metadata (repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
  current version: 23.7.4
  latest version: 24.5.0

Please update conda by running

  $ conda update -n base -c defaults conda

Or to minimize the number of packages updated during conda update use

  conda install conda=24.5.0

## Package Plan ##
  environment location: C:\Users\prath\anaconda3\envs\chatbot
  added / updated specs:
    - python==3.8.10

The following packages will be downloaded:

  package                               | build
```

The following packages will be downloaded:

package	build	
pip-24.0	py38haa95532_0	2.8 MB
setuptools-69.5.1	py38haa95532_0	1003 KB
sqlite-3.45.3	h2bbff1b_0	973 KB
vc-14.2	h2eaa2aa_1	10 KB
vs2015_runtime-14.29.30133	h43f2093_3	1.1 MB
wheel-0.43.0	py38haa95532_0	137 KB
Total:		6.0 MB

The following NEW packages will be INSTALLED:

ca-certificates	pkgs/main/win-64::ca-certificates-2024.3.11-haa95532_0
openssl	pkgs/main/win-64::openssl-1.1.1w-h2bbff1b_0
pip	pkgs/main/win-64::pip-24.0-py38haa95532_0
python	pkgs/main/win-64::python-3.8.10-hdbf39b2_7
setuptools	pkgs/main/win-64::setuptools-69.5.1-py38haa95532_0
sqlite	pkgs/main/win-64::sqlite-3.45.3-h2bbff1b_0
vc	pkgs/main/win-64::vc-14.2-h2eaa2aa_1
vs2015_runtime	pkgs/main/win-64::vs2015_runtime-14.29.30133-h43f2093_3
wheel	pkgs/main/win-64::wheel-0.43.0-py38haa95532_0

Proceed ([y]/n)? y

Downloading and Extracting Packages

Preparing transaction: done

Verifying transaction: done

Executing transaction: done

#

To activate this environment, use

#

\$ conda activate chatbot

#

Proceed ([y]/n)? y

Downloading and Extracting Packages

Preparing transaction: done

Verifying transaction: done

Executing transaction: done

#

To activate this environment, use

#

\$ conda activate chatbot

#

To deactivate an active environment, use

#

\$ conda deactivate

(base) C:\Users\prath\OneDrive\Desktop\chatbot> \$ conda activate chatbot
'\$' is not recognized as an internal or external command,
operable program or batch file.

(base) C:\Users\prath\OneDrive\Desktop\chatbot>conda activate chatbot

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot>|

```

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot>python -m pip cache purge
Files removed: 1007

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot>python -m pip install -u pip

Usage:
  C:\Users\prath\anaconda3\envs\chatbot\python.exe -m pip install [options] <requirement specifier> [package-index-options] ...
  C:\Users\prath\anaconda3\envs\chatbot\python.exe -m pip install [options] -r <requirements file> [package-index-options] ...
  C:\Users\prath\anaconda3\envs\chatbot\python.exe -m pip install [options] [-e] <vcs project url> ...
  C:\Users\prath\anaconda3\envs\chatbot\python.exe -m pip install [options] [-e] <local project path> ...
  C:\Users\prath\anaconda3\envs\chatbot\python.exe -m pip install [options] <archive url/path> ...

no such option: -u

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot>pip install rasa==3.0.2
Collecting rasa==3.0.2
  Downloading rasa-3.0.2-py3-none-any.whl.metadata (23 kB)
Collecting CacheControl<0.13.0,>=0.12.9 (from rasa==3.0.2)
  Downloading CacheControl-0.12.14-py2.py3-none-any.whl.metadata (2.2 kB)
Collecting PyJWT<3.0.0,>=2.0.0 (from PyJWT[crypto]<3.0.0,>=2.0.0->rasa==3.0.2)
  Downloading PyJWT-2.8.0-py3-none-any.whl.metadata (4.2 kB)
Collecting SQLAlchemy<1.5.0,>=1.4.0 (from rasa==3.0.2)
  Downloading SQLAlchemy-1.4.52-cp38-cp38-win_amd64.whl.metadata (10 kB)
Collecting absl-py<0.14,>=0.9 (from rasa==3.0.2)
  Downloading absl_py-0.13.0-py3-none-any.whl.metadata (2.4 kB)
Collecting aio-pika<7.0.0,>=6.7.1 (from rasa==3.0.2)
  Downloading aio_pika-6.8.2-py3-none-any.whl.metadata (9.0 kB)
Collecting aiohttp<3.7.4.post0,<3.8,>=3.6 (from rasa==3.0.2)
  Downloading aiohttp-3.7.4-cp38-cp38-win_amd64.whl.metadata (38 kB)
Collecting apscheduler<3.8,>=3.6 (from rasa==3.0.2)
  Downloading APScheduler-3.7.0-py2.py3-none-any.whl.metadata (5.7 kB)
Collecting async_generator<1.11,>=1.10 (from rasa==3.0.2)
  Downloading async_generator-1.10-py3-none-any.whl.metadata (4.9 kB)
Collecting attrs<21.3,>=19.3 (from rasa==3.0.2)
  Downloading attrs-21.2.0-py2.py3-none-any.whl.metadata (9.1 kB)

```

```

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot>Pip install websockets==10.0
Collecting websockets==10.0
  Downloading websockets-10.0-cp38-cp38-win_amd64.whl.metadata (6.4 kB)
  Downloading websockets-10.0-cp38-cp38-win_amd64.whl (96 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 96.0/96.0 kB 5.4 MB/s eta 0:00:00
Installing collected packages: websockets
  Attempting uninstall: websockets
    Found existing installation: websockets 12.0
    Uninstalling websockets-12.0:
      Successfully uninstalled websockets-12.0
  Successfully installed websockets-10.0

(chatbot) C:\Users\prath\OneDrive\Desktop\chatbot> Pip install protobuf==3.20
Collecting protobuf==3.20
  Downloading protobuf-3.20.0-cp38-cp38-win_amd64.whl.metadata (699 bytes)
  Downloading protobuf-3.20.0-cp38-cp38-win_amd64.whl (904 kB)
    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 904.4/904.4 kB 4.8 MB/s eta 0:00:00
Installing collected packages: protobuf
  Attempting uninstall: protobuf
    Found existing installation: protobuf 5.26.1
    Uninstalling protobuf-5.26.1:
      Successfully uninstalled protobuf-5.26.1
  Successfully installed protobuf-3.20.0

```

