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"id": "8f2aba52",

"metadata": {},

"source": [

"# Project No 3: Rule Based ChatBot\n"

]

},

{

"cell\_type": "markdown",

"id": "b4bdf145",

"metadata": {},

"source": [

"A rule-based bot uses some rules on which it is trained, while a self-learning bot uses some machine-learning-based approach to chat.\n",

"\n",

"In this tutorial, I will show you how to create a simple and quick chatbot in python using a rule-based approach."

]

},

{

"cell\_type": "code",

"execution\_count": 1,

"id": "c6b7efd0",

"metadata": {},

"outputs": [],

"source": [

"from nltk.chat.util import Chat, reflections"

]

},

{

"cell\_type": "markdown",

"id": "2aac0fb1",

"metadata": {},

"source": [

"# Create the chatbots list of recognizable patterns and it’s a response to those patterns. To do this we will create a variable called pairs."

]

},

{

"cell\_type": "code",

"execution\_count": 2,

"id": "159e2ea4",

"metadata": {},

"outputs": [],

"source": [

"#Pairs is a list of patterns and responses.\n",

"pairs = [\n",

" [\n",

" r\"(.\*)my name is (.\*)\",\n",

" [\"Hello %2, How are you today ?\",]\n",

" ],\n",

" [\n",

" r\"(.\*)help(.\*) \",\n",

" [\"I can help you \",]\n",

" ],\n",

" [\n",

" r\"(.\*) your name ?\",\n",

" [\"My name is thecleverprogrammer, but you can just call me robot and I'm a chatbot .\",]\n",

" ],\n",

" [\n",

" r\"how are you (.\*) ?\",\n",

" [\"I'm doing very well\", \"i am great !\"]\n",

" ],\n",

" [\n",

" r\"sorry (.\*)\",\n",

" [\"Its alright\",\"Its OK, never mind that\",]\n",

" ],\n",

" [\n",

" r\"i'm (.\*) (good|well|okay|ok)\",\n",

" [\"Nice to hear that\",\"Alright, great !\",]\n",

" ],\n",

" [\n",

" r\"(hi|hey|hello|hola|holla)(.\*)\",\n",

" [\"Hello\", \"Hey there\",]\n",

" ],\n",

" [\n",

" r\"what (.\*) want ?\",\n",

" [\"Make me an offer I can't refuse\",]\n",

" \n",

" ],\n",

" [\n",

" r\"(.\*)created(.\*)\",\n",

" [\"Noor Saeed created me using Python's NLTK library \",\"top secret ;)\",]\n",

" ],\n",

" [\n",

" r\"(.\*) (location|city) ?\",\n",

" ['Dera Ismail Khan, KPK',]\n",

" ],\n",

" [\n",

" r\"(.\*)raining in (.\*)\",\n",

" [\"No rain in the past 4 days here in %2\",\"In %2 there is a 50% chance of rain\",]\n",

" ],\n",

" [\n",

" r\"how (.\*) health (.\*)\",\n",

" [\"Health is very important, but I am a computer, so I don't need to worry about my health \",]\n",

" ],\n",

" [\n",

" r\"(.\*)(sports|game|sport)(.\*)\",\n",

" [\"I'm a very big fan of Cricket\",]\n",

" ],\n",

" [\n",

" r\"who (.\*) (Cricketer|Batsman)?\",\n",

" [\"Babir Azam\"]\n",

" ],\n",

" [\n",

" r\"quit\",\n",

" [\"Bye for now. See you soon :) \",\"It was nice talking to you. See you soon :)\"]\n",

" ],\n",

" [\n",

" r\"(.\*)\",\n",

" ['That is nice to hear']\n",

" ],\n",

"]"

]

},

{

"cell\_type": "markdown",

"id": "783cf7c2",

"metadata": {},

"source": [

"Okay, so as we finished the patterns and responses, let’s take a look at something called reflections. Reflections is a dictionary file that contains a set of input values and corresponding output values."

]

},

{

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"metadata": {},

"source": [

"For example, if the string input was “I am a programmer”, then the output would be “you are a programmer”."

]

},

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"id": "623a3bf5",

"metadata": {},

"outputs": [

{

"name": "stdout",

"output\_type": "stream",

"text": [

"{'i am': 'you are', 'i was': 'you were', 'i': 'you', \"i'm\": 'you are', \"i'd\": 'you would', \"i've\": 'you have', \"i'll\": 'you will', 'my': 'your', 'you are': 'I am', 'you were': 'I was', \"you've\": 'I have', \"you'll\": 'I will', 'your': 'my', 'yours': 'mine', 'you': 'me', 'me': 'you'}\n"

]

}

],

"source": [

"print(reflections)"

]

},

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"metadata": {},

"outputs": [],

"source": [

"# Our Own Reflections\n",

"my\_dummy\_reflections= {\n",

" \"go\" : \"gone\",\n",

" \"hello\" : \"hey there\"\n",

"}"

]

},

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"id": "36a1688e",

"metadata": {},

"outputs": [

{

"name": "stdout",

"output\_type": "stream",

"text": [

"Hi, I'm thecleverprogrammer and I like to chat\n",

"Please type lowercase English language to start a conversation. Type quit to leave \n"

]

}

],

"source": [

"#default message at the start of chat\n",

"print(\"Hi, I'm thecleverprogrammer and I like to chat\\nPlease type lowercase English language to start a conversation. Type quit to leave \")\n",

"#Create Chat Bot\n",

"chat = Chat(pairs, reflections)"

]

},

{

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"# Now, let’s start a conversation"

]

},

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{

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"output\_type": "stream",

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">what is your name\n",

"My name is thecleverprogrammer, but you can just call me robot and I'm a chatbot .\n",

">who created you\n",

"top secret ;)\n",

">what is your favourite sport\n",

"I'm a very big fan of Cricket\n",

">who is your favourite batsman\n",

"Babir Azam\n",

">your locatoin\n",

"That is nice to hear\n",

">your location\n",

"Dera Ismail Khan, KPK\n"

]

}

],

"source": [

"chat.converse()"

]

},

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"id": "cf12bf40",

"metadata": {},

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}

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"version": 3

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"pygments\_lexer": "ipython3",

"version": "3.10.6"

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