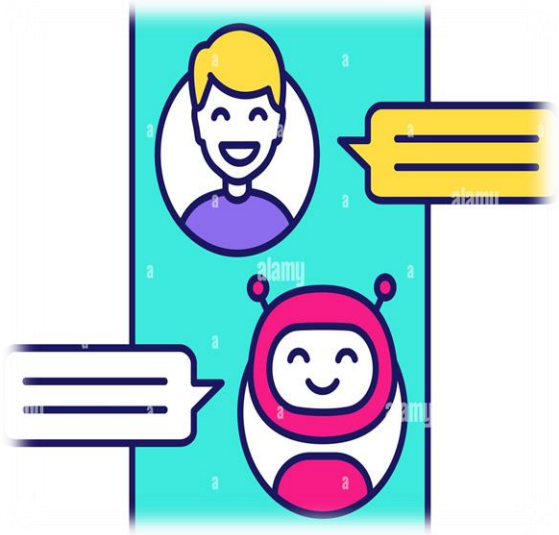

Chatbot System AI project By Python

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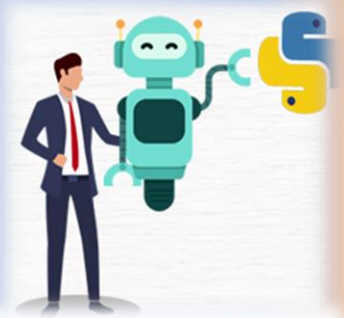
About Project

***Project Name** : Chat-bot for Educational Institution Management System using Artificial Intelligence by Python*

What is Chatbot:

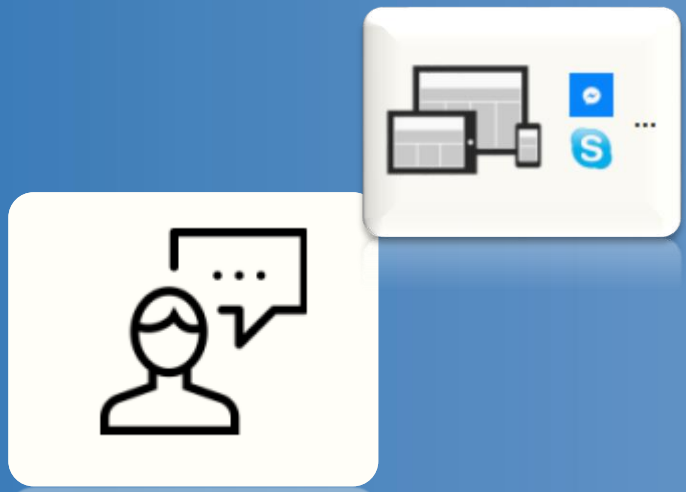
A chatter robot (chatbot) is a type of conversational agent, a computer program designed to simulate an intelligent conversation with one or more human users in natural language via auditory or textual methods.



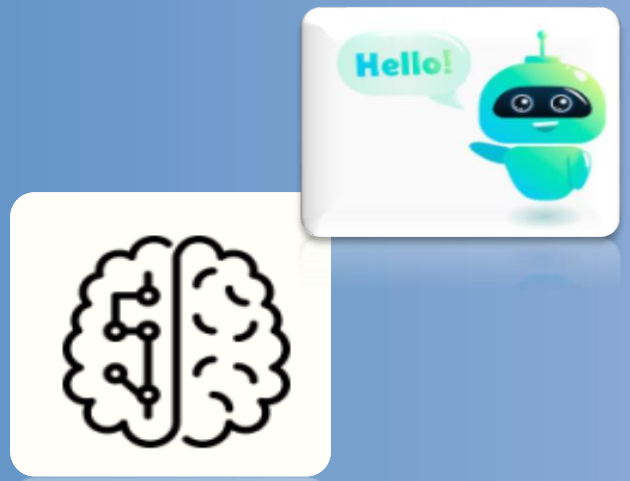
Application

- Project is built using artificial algorithms that analyses user's queries and understand user's message.
- This System is a web application which provides answer to the query of the Student, Teacher, Authorities.
- Students/ Teacher/Authorities just have to query through the bot which is used for chating.
- Can chat using any format there is no specific format the user has to follow.
- The User can query any institution related activities through the system. The user does not have to personally go to the institution for enquiry.
- The System analyses the question and than answers to the user.
- The user can query institution related activities such as date and timing of annual day, sports day, and other cultural activities.
- This system helps the student to be updated about the institution activities.
- The System uses built in artificial intelligence to answer the query. The answers are appropriate what the user queries.

How AI Works in Chatbot?



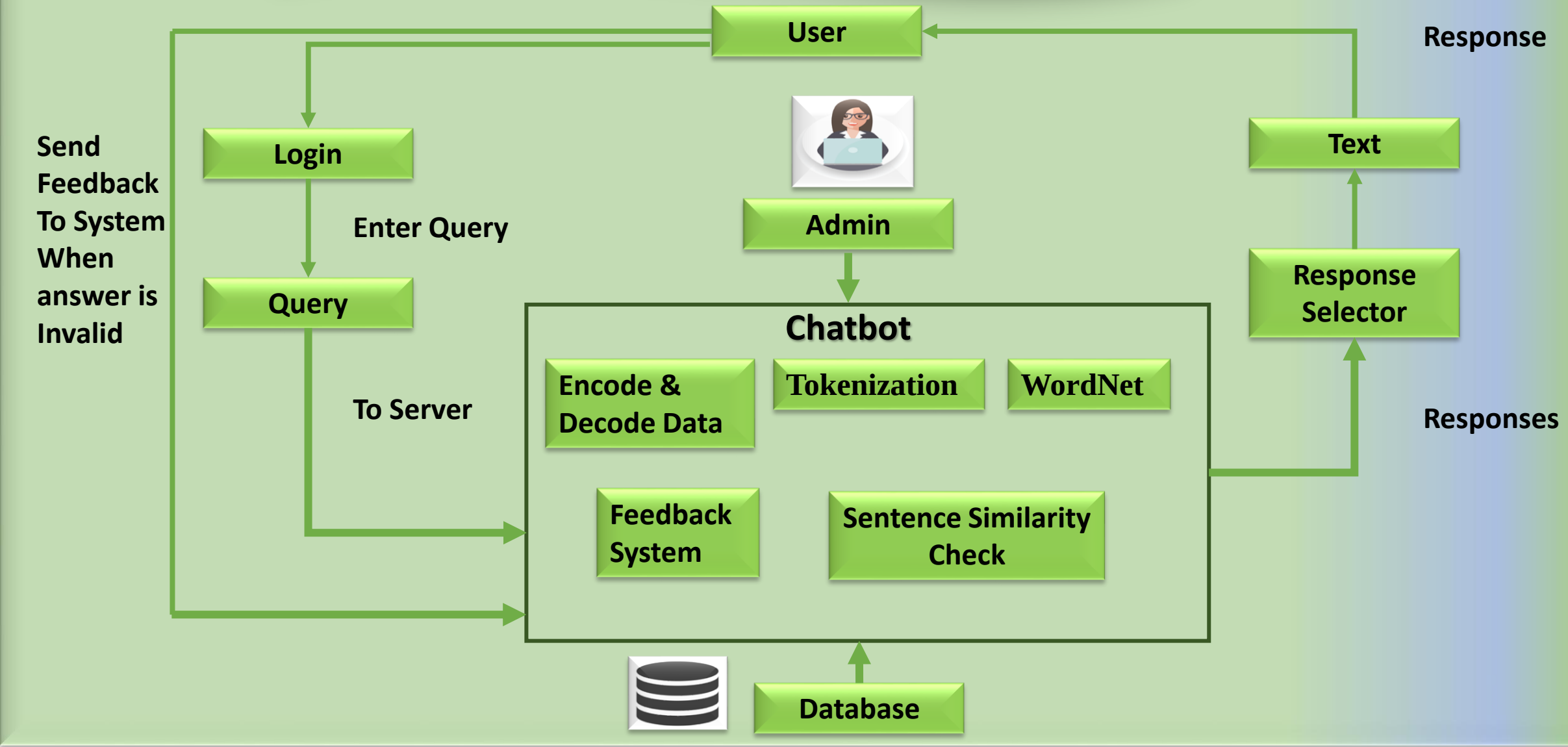
User makes a request



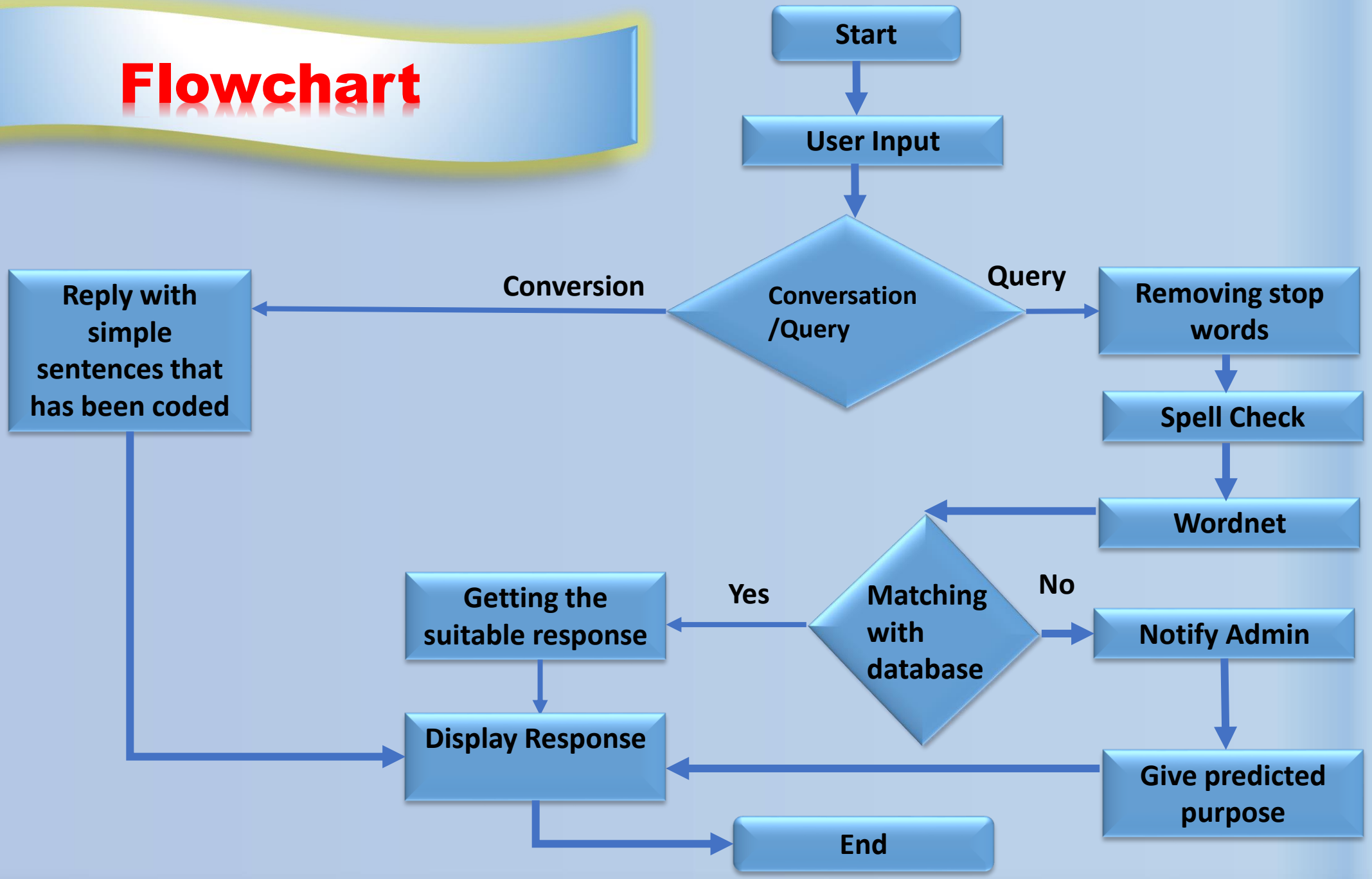
Request analyzed
by artificial intelligence
User info taken into account
(history, preferences…)

Real time response
Conversational strategy
Interactions personalization

Chatbot system Architecture



Flowchart


Start
User Input
Conversation /Query
Conversion
Query
Reply with simple sentences that has been coded
Removing stop words
Spell Check
Wordnet
Matching with database
Yes
No
Getting the suitable response
Notify Admin
Display Response
Give predicted purpose
End

Why Python Based and Basic Procedure

- It makes use of a combination of ML algorithms to generate many different types of responses.
- This feature allows developers to build chatbots using python that can converse with humans and deliver appropriate and relevant responses.
- This makes Python especially useful for prototyping algorithms for AI.

1. Prepare the Dependencies

```
pip install --upgrade chatterbot_corpus
pip install --upgrade chatterbot
```

2. Import Classes

```
from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer
```

3. Create and Practice the Chatbot

```
my_bot = ChatBot(name='PyBot', read_only=True,
                 logic_adapters=
['chatterbot.logic.MathematicalEvaluation',
                                 'chatterbot.logic.BestMatch'])
```

Why Python Based and Basic Procedure

4. by specifying the lists of strings that can be later used to prepare your Python chatbot, and discover the most effective match

```
small_talk = ['hi there!',
              'hi!',
              'how do you do?',
              'how are you?',
              'i\'m cool.',
              'fine, you?',
              'always cool.',
              'i\'m ok',
              'glad to hear that.',
              'i\'m fine',
              'glad to hear that.',
              'i feel awesome',
              'excellent, glad to hear that.',
              'not so good',
              'sorry to hear that.',
              'what\'s your name?',
              'i\'m pybot. ask me a math question, please.']

math_talk_1 = ['pythagorean theorem',
               'a squared plus b squared equals c squared.']

math_talk_2 = ['law of cosines',
               'c**2 = a**2 + b**2 - 2 * a * b * cos(gamma)']
```

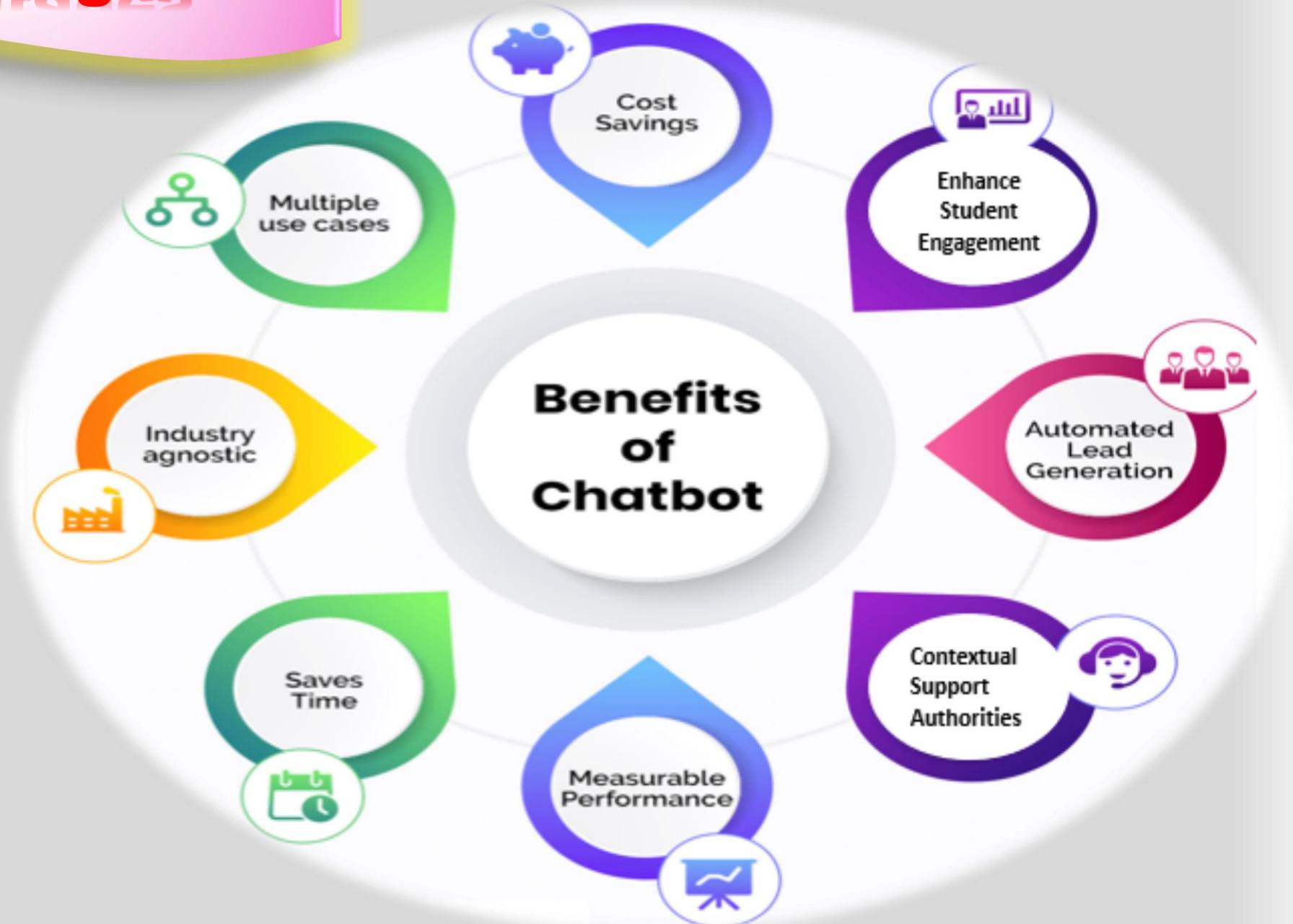
5.Practice your Python Chatbot with a Corpus of Data

```
from chatterbot.trainers import ChatterBotCorpusTrainer


corpus_trainer = ChatterBotCorpusTrainer(my_bot)
corpus_trainer.train('chatterbot.corpus.english')
```

What we've illustrated right here is the way of making bot in Python.

Advantages


Benefits of Chatbot
Cost Savings
Enhance Student Engagement
Automated Lead Generation
Contextual Support Authorities
Measurable Performance
Saves Time
Industry agnostic
Multiple use cases

User May Face

- This system requires Internet Connection.
- If many user enquires at same time, response will be slow.

Upcoming Features

- A voice-activated chatbot
- Differerant Language Translator
- Appointment scheduling

Conclusion

- In this project we made a institution specific chatbot system that can be custom fitted to education domain chatbot, The addition of this chatbot system in the institution website will make the webpage more user interactive as it responds to the user queries very accurately as it is a domain specific chatbot System.

Thank You!