Chatbot report

Made by:
Eugen-Mihai FLOCEA,
Jonathan SAND

Link for our GitHub repository: https://github.com/Jonathan2021/chatbot_recommendation

The idea of our project was to build a chatbot that is able to recommend books to its users that are readers. In order to do so, we searched for a book dataset to build our recommendation system. The dataset contains information about thousands of books like rating, title, authors, gender etc.

Before starting the work, we splitted the work. Jonathan SAND is responsible for building the recommendation system and Eugen for coding the chatbot.

We choose to do the chatbot in JavaScript and the recommendation system in python. The server that we choose to operate the chatbot is Facebook Messenger.

In order to make the connection with Facebook Messenger we created an application on Facebook for developers website and a class in JavaScript designed to deal with the connection between Messenger and chatbot. We had to make the connection between the server and Messenger by the app's access token and by a verify token that can be chosen by us:

```json
{
  "FB": {
    "pageAccessToken": "EAACbYZCabz18BANm4GDOA7x4QVZAchBbqgmXxrvgRaqLpE
    "verifyToken": "whatever I want",
    "appSecret": "8ee3cce20339ef5d2b1b3e075512057f"
  }
}
```

The pageAccessToken is provided from the Facebook page, the same for the appSecret:

In order to connect the Messenger app with the chatbot app we used a webhook which works like this:
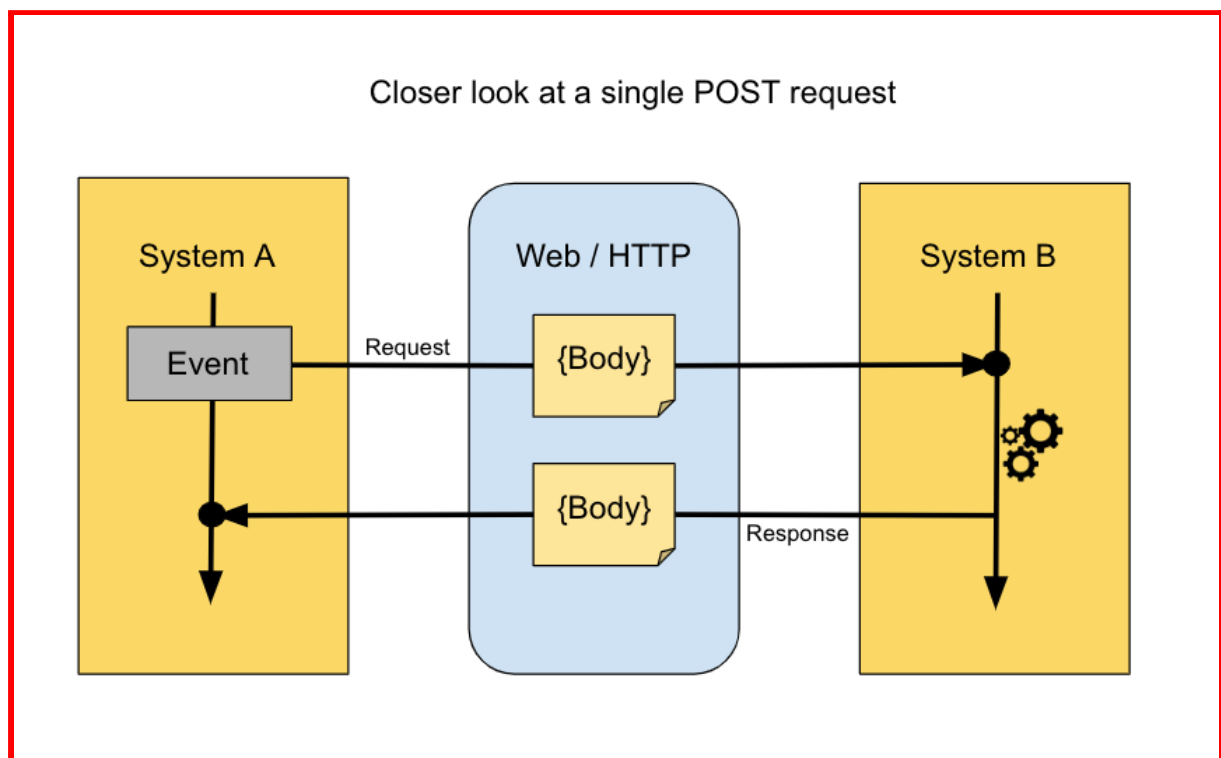
Here System A is represented by the Messenger who takes care of the Events which are the users messages and System B by our JavaScript application that computes the responses. {Body} represents the messages that have been exchanged.

To use the webhooks we use ngrok. After typing the command `ngrok http 3000' that connects our server to the webhook by port 3000. A new windows pop out

We have to take the "Forwarding link", the one highlighted, and register in our Messenger application with our access token also.

After we run our server with `nodemon server.js` command. We can verify and save the webhook and if everything is alright we should receive a message that the webhook is well registered.

Now we can exchange messages with our chatbot.

The messages we can exchange with our chatbot are:
- Basic greetings messages, for example:
    - Hi
    - How are you?
- Request for a book:
    - I want a book
- Giving info about us such that he can recommend us a book:
    - My favorite book is <title of a book>
    - My favorite book is <title of a book> by <name of author>

- My favorite book is <title of a book> that belongs to the serie <serie name>
- My favorite book is <title of a book> by <name of author> that belongs to the serie <serie name>

The recommendation system can be find at api.py in the recommendation folder.

The building phase of the model follows the reflexion from the notebook in the same folder.