DALBOT

Chatbot for Dalhousie University, Halifax

Rishika Bajaj (B00902713), Sampada Thakkar (B00893022), Suchitra Dhamu (B00897187)

Introduction

Our DalBot is a chatbot for answering queries related to Dalhousie University courses, payments and societies. We created DalBot because some people face issues while navigating through the sites. They find it much easier to interact with bots and get instant answers rather than navigating and searching for the same. Bots have the capability to give calculated and accurate answers with proper training and testing.

Approaches

To make the chatbot effective, we made 2 chatbots using 2 different techniques:

1. Using NLP and Feed Forward
2. Using Cosine Similarity

Approach 1

Our NLP Processing Pipeline

"Hi, is anyone there?"

⬇ Tokenization

["Hi", "," ,"is" ,"anyone" ,"there", "?"]

⬇ Stemming + Lower Case

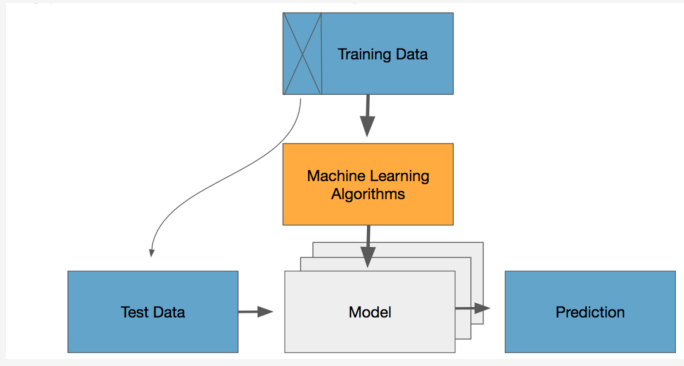
["hi", "," ,"is" ,"anyon" ,"there", "?"]

⬇ Excluding Punctuation Characters

["hi" ,"is" ,"anyon" ,"there"]

⬇ Comparing with Bag of Words

[1,0,0,0,1,0,1,0,1]



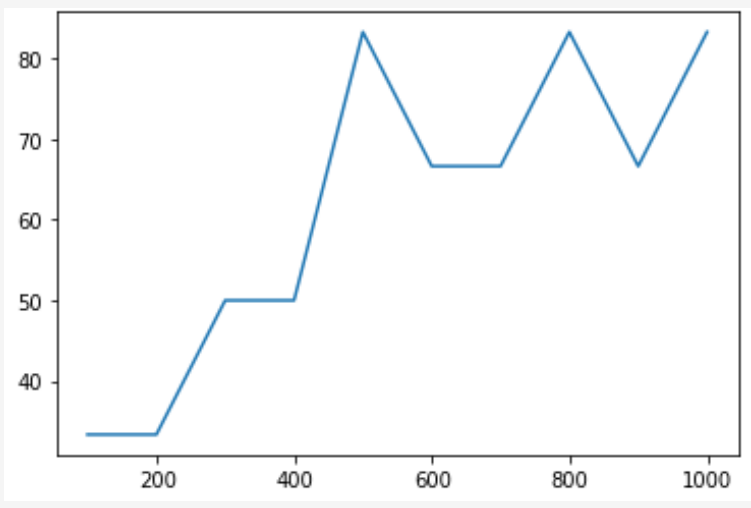
Approach 2

Co-sine distance from patterns is calculted. Then, we found the best answer which has greatest co-sine similarity.

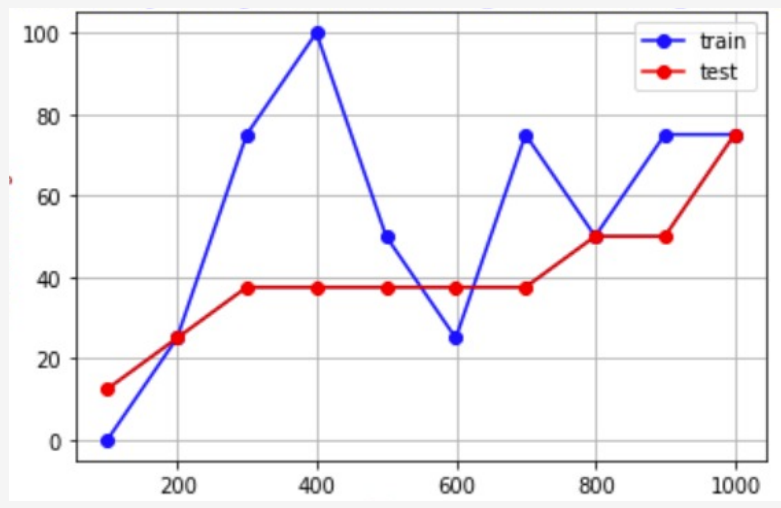
Results of Approach 2

WordCloud of Intents

Results of Approach 1



Train (Accuracy vs Epoch)



Train+Test (Accuracy vs Epoch)

DalBot Queries and Responses

Using Approach 1

```
Let's chat! (type 'quit' to exit)
You: hi
DalBot: Hi there, how can I help?
You: how is the weather?
DalBot: The weather seems to be sunny today.
You: start over
DalBot: How can I help you

You:
```

Using Approach 2

```
Please enter your username: SRS
support: Hi SRS, welcome to Q&A support.
Input: hi
DalBot: Hey :-)
Input: are you a robot?
DalBot: Yes I am a robot but I am a smart one!

Input:
```