Entity Recognition in a chatbot

Newbot’s integrated NLP provides entity recognition of certain predefined types:

* Date
* Distance (km, miles, etc.)
* Duration (sec, min, hour, etc.)
* Amount of money (eur, usd, etc.)
* E-mail
* Credit Card Number
* Amount
* URLs
* Phone Number
* Temperature (C, F, etc.)
* Volume (gallon, liter, etc.)
* Is present
* Number
* **Data externals**

[Here](https://newbot.io/en/docs/cloud/nlp/data-entity.html#doc), a link to the documentation, describing that the predefined type *Data Externals* can be used in order to recognize custom entities in a sentence. In our case, a sample sentence is:

*Show me the wines of* ***producer*** *Aggelakis*

We want to recognize the word producer as an entity identifier and then understand that the name of the producer is *Aggelakis*.

In a simple use case and with certain wordings used, the above has been achieved with a Regular Expression. We identify the string Aggelakis as a producer name and check if this producer exists into the list of producers returned from the servlet (stemming has been applied here).

## **Problems:**

I can’t understand exactly what the documentation suggests to do to identify custom entities. Not enough examples available (in this case no example outside the documentation).

### Workaround:

Use an external NLP API to do the required entity recognition. We can use Wit.ai, DialogFlow, Rasa NLP etc. We decide to use the Wit.ai API.

#### Issues with this workaround:

When the number of frameworks used increases, then the code can become heavier.

## Need to know for the Entity Recognition with Wit.ai (technical)

Created intention (trained with 5 phrases) so that we can identify if a producer is mentioned in a phrase

Eg.

Show me wines of producer **aggelakis**

Display wines made by producer **alexakis**

Show producer **douloufakis**’s wines

If we train the intention with enough phrases, we can recognize a producer mentioned without need for the word producer before

What products are made by **Lyrarakis**?

**Get response from wit.ai extracting the string**<https://wit.ai/docs/http/20200513/#get__message_link>

Results are in JSON format

Eg. *show me wines of producer alexakis*

response.intents[0].name 🡪 extractProducer

response.entities[‘producer:producer’][0].value 🡪 alexakis