

Project overview

Our final project is a platform for doing NER annotations on cooking-domain texts. Our NER model will label the text received from the user, but the user can make changes to the labels if they disagree. After the labeling is approved by the user, the text and the labels are saved into the database, and the now-labeled text could be re-loaded later to make changes to the labels.

The instruction on running the web app could be found in this repo:
<https://github.com/JinnyViboonlarp/cs217-project/tree/main>

The details about our NER model and the “NLP component” part of our project is described in this repo: <https://github.com/JinnyViboonlarp/cs217-training-cooking-ner/tree/main>

Group members' responsibility

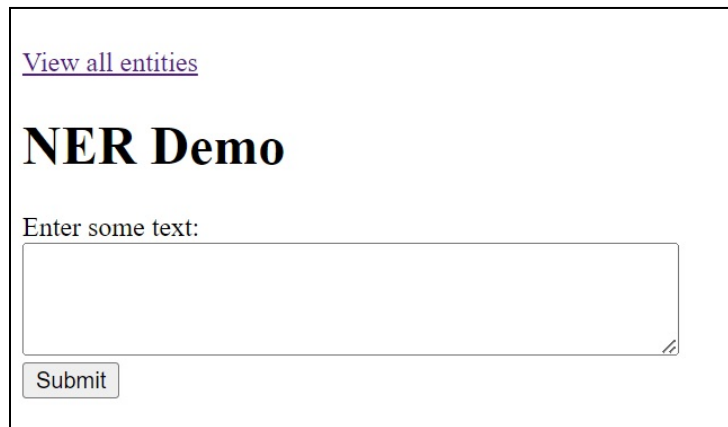
Jinny: training the NER models for cooking domains, integrating the best model with the web app, and dockerizing the web app.

Hasan: working on the front-end of the web app, especially on the page which allows the user to edit the model-labeled text. He also worked on exporting the finished annotation into a text file.

Theo: working on the back-end of the web app, especially on the database which allows the texts that are previously labeled and submitted to be re-loaded into the edit page again. He also has tested running the web app on a different machine, and thus has caught an instance of bad implementation on the NER-model integration part, which then alerted us to revise the code into its simpler and less error-prone version.

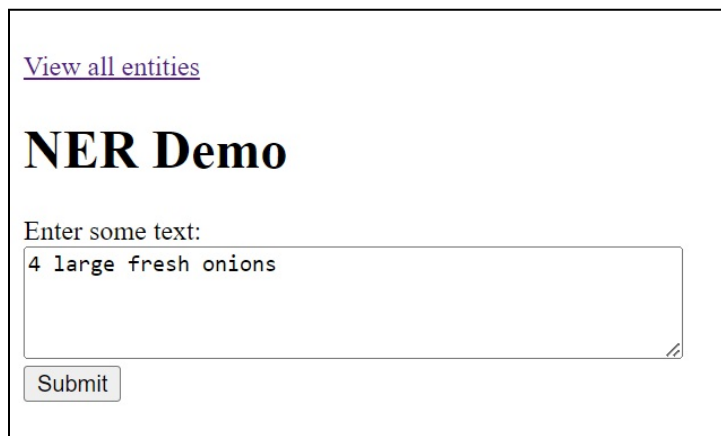
How to use our web app

1. When visiting *http://127.0.0.1:5000*, you should be able to see this page:



The screenshot shows a web browser window with a purple link "View all entities" at the top left. Below it is the title "NER Demo" in a large, bold, black serif font. Under the title is the text "Enter some text:" followed by a large, empty text input field. At the bottom left of the input field is a small "Submit" button.

2. You could enter a sentence describing cooking ingredients. For example, you might type in one of these:
 - 1/2 large sweet red onion, thinly sliced
 - 1/2 cup fresh bean sprouts, or to taste (optional)
 - 4 eggs, whites and yolks separated



This screenshot is identical to the one above, but the text input field now contains the text "4 large fresh onions". The "Submit" button remains at the bottom left.

3. After clicking the *submit* button, the web will be directed to the page where the automatic labelings are shown.

NER Result

Input text: 4 large fresh onions

4 QUANTITY

large SIZE

fresh DF

onions NAME

| Entity | Type | Edit |
|--------|----------|---------------------------------------|
| 4 | QUANTITY | <input type="text" value="QUANTITY"/> |
| large | SIZE | <input type="text" value="SIZE"/> |
| fresh | DF | <input type="text" value="DF"/> |
| onions | NAME | <input type="text" value="NAME"/> |

Update

Submit

Export

4. If you disagree with the automatic taggings, you can type in your label(s) and click the *update* button. Then, you could click the *submit* button, and will be redirected to this page again.

[View all entities](#)

NER Demo

Enter some text:

Submit

5. Now, you could choose to enter a new sentence, or, if you click on *View all entities*, you could see the text that you have already annotated (your taggings are saved along with the text, but are not shown on this page)

| Annotations | | | |
|--------------|----------------------|------|--------|
| ID | Input Text | | |
| 1 | 4 large fresh onions | Edit | Delete |
| Back to Home | | | |

6. You could click the red *delete* button to delete the annotation (the text and its taggings), or click the yellow *edit* button in case you change your mind about your past taggings and would like to re-do it. After clicking the *edit* button behind a text, you will be redirected to the page where you can make changes to the tagging of each token in the text.

| NER Result | | |
|---|----------|---------------------------------------|
| Input text: 4 large fresh onions | | |
| <div>4 QUANTITY large SIZE fresh DF onions NAME</div> | | |
| Entity | Type | Edit |
| 4 | QUANTITY | <input type="text" value="QUANTITY"/> |
| large | SIZE | <input type="text" value="SIZE"/> |
| fresh | DF | <input type="text" value="DF"/> |
| onions | NAME | <input type="text" value="NAME"/> |
| <div>Update</div> <div>Submit</div> <div>Export</div> | | |

7. At this page, you could also click the *Export* button to export the tokens and their labels into a tab-separated .txt file.