6_7_Implementing_Named_Entity_Recognition___NER_

December 26, 2024

```python
[1]: # Importing libraries
     import spacy
     from spacy import displacy
```

```python
[2]: # Loading model
     nlp=spacy.load('en_core_web_sm')
```

```python
[3]: # Defining String
     text="""Switzerland, officially the Swiss Confederation, is a country situated
     ↪in the confluence of Western, Central, and Southern Europe. It is a federal
     ↪republic composed of 26 cantons, with federal authorities based in Bern.
     ↪Switzerland is a landlocked country bordered by Italy to the south, France
     ↪to the west, Germany to the north, and Austria and Liechtenstein to the east.
     ↪ It is geographically divided among the Swiss Plateau, the Alps, and the
     ↪Jura, spanning a total area of 41,285 km2, and land area of 39,997 km2.
     ↪While the Alps occupy the greater part of the territory, the Swiss
     ↪population of approximately 8.5 million is concentrated mostly on the
     ↪plateau, where the largest cities and economic centres are located, among
     ↪them Zürich, Geneva and Basel, where multiple international organisations
     ↪are domiciled (such as FIFA, the UN's second-largest Office, and the Bank
     ↪for International Settlements) and where the main international airports of
     ↪Switzerland are."""
```

```python
[4]: # Creating doc object
     doc=nlp(text)
```

```python
[5]: # Getting Named Entities
     for entity in doc.ents:
       print(entity.text,'=>',entity.start_char,'=>',entity.end_char,'=>',entity.
     ↪label_)
```

```
Switzerland => 0 => 11 => GPE
the Swiss Confederation => 24 => 47 => ORG
Western => 92 => 99 => NORP
Central => 101 => 108 => ORG
Southern Europe => 114 => 129 => LOC
26 => 168 => 170 => CARDINAL
Bern => 214 => 218 => LOC
```

```
Switzerland => 220 => 231 => GPE
Italy => 268 => 273 => GPE
France => 288 => 294 => GPE
Germany => 308 => 315 => GPE
Austria => 334 => 341 => GPE
Liechtenstein => 346 => 359 => GPE
the Swiss Plateau => 408 => 425 => LOC
Alps => 431 => 435 => LOC
41,285 => 476 => 482 => CARDINAL
39,997 => 505 => 511 => CARDINAL
km2 => 512 => 515 => PERSON
Alps => 527 => 531 => LOC
Swiss => 578 => 583 => NORP
approximately 8.5 million => 598 => 623 => CARDINAL
Zürich => 733 => 739 => GPE
Geneva => 741 => 747 => GPE
Basel => 752 => 757 => GPE
FIFA => 825 => 829 => ORG
UN => 835 => 837 => ORG
second => 840 => 846 => ORDINAL
the Bank for International Settlements => 867 => 905 => ORG
Switzerland => 952 => 963 => GPE
```

```python
# Visualizing Named Entities
displacy.render(doc,style='ent',jupyter=True)
```

<IPython.core.display.HTML object>

[ ]: