

```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

```
cd drive/MyDrive/roberta-base
```

/content/drive/MyDrive/roberta-base

```
pip install https://huggingface.co/opennnaaiorg/en_legal_ner_trf/resolve/main/en_legal_ner_trf-any-py3-none-any.whl
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting en-legal-ner-trf==any
  Downloading https://huggingface.co/opennnaaiorg/en_legal_ner_trf/resolve/main/en_legal_ner_trf-any-py3-none-any.whl (446.7 MB)
    |████████████████████| 446.7 MB 26 kB/s
Collecting spacy<3.3.0,>=3.2.2
  Downloading spacy-3.2.4-cp38-cp38-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (6.2 MB)
    |████████████████████| 6.2 MB 3.7 MB/s
Collecting spacy-transformers<1.2.0,>=1.1.4
  Downloading spacy_transformers-1.1.8-py2.py3-none-any.whl (53 kB)
    |████████████████████| 53 kB 2.1 MB/s
Collecting thinc<8.1.0,>=8.0.12
  Downloading thinc-8.0.17-cp38-cp38-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (671 kB)
    |████████████████████| 671 kB 86.7 MB/s
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (21.3)
Requirement already satisfied: numpy>=1.15.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (1.21.6)
Requirement already satisfied: click<8.1.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (7.1.2)
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.23.0)
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.0.8)
Requirement already satisfied: setuptools in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (57.4.0)
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.8 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (3.0.10)
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (3.0.8)
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (1.0.9)
Collecting typer<0.5.0,>=0.3.0
  Downloading typer-0.4.2-py3-none-any.whl (27 kB)
Requirement already satisfied: blis<0.8.0,>=0.4.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (0.7.9)
Requirement already satisfied: langcodes<4.0.0,>=3.2.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (3.3.0)
Requirement already satisfied: srsly<3.0.0,>=2.4.1 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.4.5)
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.0.7)
Requirement already satisfied: pathy>=0.3.5 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (0.10.0)
Requirement already satisfied: wasabi<1.1.0,>=0.8.1 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (0.10.1)
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (1.0.3)
Requirement already satisfied: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (4.64.1)
Collecting pydantic!=1.8,!=1.8.1,<1.9.0,>=1.7.4
  Downloading pydantic-1.8.2-cp38-cp38-manylinux2014_x86_64.whl (13.7 MB)
    |████████████████████| 13.7 MB 11.8 MB/s
Requirement already satisfied: jinja2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.11.3)
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from packaging>=20.0->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (3.0.9)
Requirement already satisfied: smart-open<6.0.0,>=5.2.1 in /usr/local/lib/python3.8/dist-packages (from pathy>=0.3.5->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (5.2.1)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.8/dist-packages (from pydantic!=1.8,!1.8.1,<1.9.0,>=1.7.4->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (4.4)
Requirement already satisfied: certifi>2017.4.17 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2022.9.24)
Requirement already satisfied: urllib3!=1.25.0,!1.25.1,<1.26,>=1.21.1 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (1.2)
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.10)
Requirement already satisfied: chardet<4,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (3.0.4)
Collecting transformers<4.22.0,>=3.4.0
  Downloading transformers-4.21.3-py3-none-any.whl (4.7 MB)
    |████████████████████| 4.7 MB 82.1 MB/s
Requirement already satisfied: torch>=1.6.0 in /usr/local/lib/python3.8/dist-packages (from spacy-transformers<1.2.0,>=1.1.4->en-legal-ner-trf==any) (1.13.0+cu116)
Collecting spacy-transformers<1.2.0,>=1.1.4
  Downloading spacy_transformers-1.1.7-py2.py3-none-any.whl (53 kB)
    |████████████████████| 53 kB 2.1 MB/s
Collecting transformers<4.21.0,>=3.4.0
  Downloading transformers-4.20.1-py3-none-any.whl (4.4 MB)
    |████████████████████| 4.4 MB 60.5 MB/s
Collecting spacy-alignments<1.0.0,>=0.7.2
  Downloading spacy_alignments-0.8.6-cp38-cp38-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (1.1 MB)
    |████████████████████| 1.1 MB 88.9 MB/s
Requirement already satisfied: filelock in /usr/local/lib/python3.8/dist-packages (from transformers<4.21.0,>=3.4.0->spacy-transformers<1.2.0,>=1.1.4->en-legal-ner-trf==any) (3.8.0)
Collecting tokenizers!=0.11.3,<0.13,>=0.11.1
```

```
pip install https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-3.2.0/en_core_web_sm-3.2.0-py3-none-any.whl
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting en-core-web-sm==3.2.0
  Downloading https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-3.2.0/en_core_web_sm-3.2.0-py3-none-any.whl (13.9 MB)
    |████████████████████| 13.9 MB 544 kB/s
Requirement already satisfied: spacy<3.3.0,>=3.2.0 in /usr/local/lib/python3.8/dist-packages (from en-core-web-sm==3.2.0) (3.2.4)
Requirement already satisfied: setuptools in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (57.4.0)
Requirement already satisfied: pathy>=0.3.5 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (0.10.0)
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.0.7)
Requirement already satisfied: pydantic!=1.8,!1.8.1,<1.9.0,>=1.7.4 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (1.8.2)
Requirement already satisfied: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (4.64.1)
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.23.0)
Requirement already satisfied: langcodes<4.0.0,>=3.2.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (3.3.0)
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.8 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (3.0.10)
Requirement already satisfied: blis<0.8.0,>=0.4.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (0.7.9)
Requirement already satisfied: typer<0.5.0,>=0.3.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (0.4.2)
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (1.0.9)
Requirement already satisfied: click<8.1.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (7.1.2)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (21.3)
Requirement already satisfied: wasabi<1.1.0,>=0.8.1 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (0.10.1)
Requirement already satisfied: numpy>=1.15.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (1.21.6)
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.0.8)
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (3.0.8)
Requirement already satisfied: srsly<3.0.0,>=2.4.1 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.4.5)
Requirement already satisfied: jinja2 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.11.3)
Requirement already satisfied: thinc<8.1.0,>=8.0.12 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (8.0.17)
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/python3.8/dist-packages (from spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (1.0.3)
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from packaging>=20.0->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (3.0.9)
Requirement already satisfied: smart-open<6.0.0,>=5.2.1 in /usr/local/lib/python3.8/dist-packages (from pathy>=0.3.5->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (5.2.1)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.8/dist-packages (from pydantic!=1.8,!1.8.1,<1.9.0,>=1.7.4->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (4.4)
Requirement already satisfied: certifi>2017.4.17 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2022.9.24)
Requirement already satisfied: urllib3!=1.25.0,!1.25.1,<1.26,>=1.21.1 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (1.2)
Requirement already satisfied: chardet<4,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (3.0.4)
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.10)
Requirement already satisfied: MarkupSafe>=0.23 in /usr/local/lib/python3.8/dist-packages (from jinja2->spacy<3.3.0,>=3.2.0->en-core-web-sm==3.2.0) (2.0.1)
Installing collected packages: en-core-web-sm
  Attempting uninstall: en-core-web-sm
    Found existing installation: en-core-web-sm 3.4.1
    Uninstalling en-core-web-sm-3.4.1:
      Successfully uninstalled en-core-web-sm-3.4.1
Successfully installed en-core-web-sm-3.2.0
```

```
!pip install -r requirements.txt
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: spacy in /usr/local/lib/python3.8/dist-packages (from -r requirements.txt (line 1)) (3.2.4)
Requirement already satisfied: bs4 in /usr/local/lib/python3.8/dist-packages (from -r requirements.txt (line 2)) (0.0.1)
Requirement already satisfied: urllib3 in /usr/local/lib/python3.8/dist-packages (from -r requirements.txt (line 3)) (1.24.3)
Requirement already satisfied: wasabi<1.1.0,>=0.8.1 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (0.10.1)
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (3.0.8)
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (2.23.0)
Requirement already satisfied: pathy>=0.3.5 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (0.10.0)
Requirement already satisfied: setuptools in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (57.4.0)
Requirement already satisfied: srsly<3.0.0,>=2.4.1 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (2.4.5)
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (2.0.7)
Requirement already satisfied: langcodes<4.0.0,>=3.2.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (3.3.0)
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (1.0.3)
Requirement already satisfied: typer<0.5.0,>=0.3.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (0.4.2)
Requirement already satisfied: click<8.1.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (7.1.2)
Requirement already satisfied: pydantic!=1.8,!1.8.1,<1.9.0,>=1.7.4 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (1.8.2)
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Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (21.3)  
Requirement already satisfied: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (4.64.1)  
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (2.0.8)  
Requirement already satisfied: Jinja2 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (2.11.3)  
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.8 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (3.0.10)  
Requirement already satisfied: thinc<8.1.0,>=8.0.12 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (8.0.17)  
Requirement already satisfied: numpy>=1.15.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (1.21.6)  
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (1.0.9)  
Requirement already satisfied: blis<0.8.0,>=0.4.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (0.7.9)  
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/lib/python3.8/dist-packages (from packaging>=20.0->spacy->-r requirements.txt (line 1)) (3.0.9)  
Requirement already satisfied: smart-open<6.0.0,>=5.2.1 in /usr/local/lib/python3.8/dist-packages (from pathy>=0.3.5->spacy->-r requirements.txt (line 1)) (5.2.1)  
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.8/dist-packages (from pydantic!=1.8,!=1.8.1,<1.9.0,>=1.7.4->spacy->-r requirements.txt (line 1)) (4.4.0)  
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy->-r requirements.txt (line 1)) (2022.9.24)  
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy->-r requirements.txt (line 1)) (2.10)  
Requirement already satisfied: chardet<4,>=3.0.2 in /usr/local/lib/python3.8/dist-packages (from requests<3.0.0,>=2.13.0->spacy->-r requirements.txt (line 1)) (3.0.4)  
Requirement already satisfied: BeautifulSoup4 in /usr/local/lib/python3.8/dist-packages (from bs4->-r requirements.txt (line 2)) (4.6.3)  
Requirement already satisfied: MarkupSafe>=0.23 in /usr/local/lib/python3.8/dist-packages (from Jinja2->spacy->-r requirements.txt (line 1)) (2.0.1)

!python3 example-doc.py

Seperating Preamble took 0.034619808197021484  
Creating doc for judgement took 9.942145347595215  
78  
Creating doc for preamble took 0.4449019432067871  
/content/drive/MyDrive/roberta-base/legal\_ner.py:39: UserWarning: [W101] Skipping Doc custom extension 'trf\_data' while merging docs.  
combined\_doc = spacy.tokens.Doc.from\_docs([doc\_preamble, doc\_judgment])  
Combining took 0.6706979274749756

!python3 example-sent.py

Seperating Preamble took 0.021465539932250977  
/content/drive/MyDrive/roberta-base/data\_preparation.py:261: UserWarning: [W101] Skipping Doc custom extension 'trf\_data' while merging docs.  
combined\_docs=spacy.tokens.Doc.from\_docs(docs)  
Creating doc for judgement took 13.631861925125122  
99  
Creating doc for preamble took 0.42284703254699707  
/content/drive/MyDrive/roberta-base/legal\_ner.py:39: UserWarning: [W101] Skipping Doc custom extension 'trf\_data' while merging docs.  
combined\_doc = spacy.tokens.Doc.from\_docs([doc\_preamble, doc\_judgment])  
Combining took 0.009042024612426758

!python -m spacy train training/config.cfg --output ./output --paths.train training/Combined\_Data\_Judgement\_Preamble\_spacy\_format/train.spacy --paths.dev training/Combined\_Data\_Judgement\_Preamble\_sent.spacy

i Saving to output directory: output  
i Using GPU: 0

===== Initializing pipeline =====

[2022-12-12 18:17:20,112] [INFO] Set up nlp object from config  
INFO:spacy:Set up nlp object from config  
[2022-12-12 18:17:20,121] [INFO] Pipeline: ['transformer', 'ner']  
INFO:spacy:Pipeline: ['transformer', 'ner']  
[2022-12-12 18:17:20,125] [INFO] Created vocabulary  
INFO:spacy:Created vocabulary  
[2022-12-12 18:17:20,125] [INFO] Finished initializing nlp object  
INFO:spacy:Finished initializing nlp object  
Downloading: 100% 481/481 [00:00<00:00, 452kB/s]  
Downloading: 100% 878k/878k [00:01<00:00, 820kB/s]  
Downloading: 100% 446k/446k [00:00<00:00, 499kB/s]  
Downloading: 100% 1.29M/1.29M [00:01<00:00, 1.22MB/s]  
Downloading: 100% 478M/478M [00:04<00:00, 110MB/s]  
Some weights of the model checkpoint at roberta-base were not used when initializing RobertaModel: ['lm\_head.layer\_norm.weight', 'lm\_head.dense.weight', 'lm\_head.bias', 'lm\_head.decoder.weight']  
- This IS expected if you are initializing RobertaModel from the checkpoint of a model trained on another task or with another architecture (e.g. initializing a BertForSequenceClassification model from a BertForTokenClassification model checkpoint).  
- This IS NOT expected if you are initializing RobertaModel from the checkpoint of a model that you expect to be exactly identical (initializing a BertForSequenceClassification model from a BertForTokenClassification model checkpoint).  
[2022-12-12 18:18:15,362] [INFO] Initialized pipeline components: ['transformer', 'ner']  
INFO:spacy:Initialized pipeline components: ['transformer', 'ner']  
✓ Initialized pipeline

===== Training pipeline =====

i Pipeline: ['transformer', 'ner']  
i Initial learn rate: 0.0

E	#	LOSS	TRANS...	LOSS NER	ENTS_F	ENTS_P	ENTS_R	SCORE
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Token indices sequence length is longer than the specified maximum sequence length for this model (514 > 512). Running this sequence through the model will result in indexing errors

0	0	22578.78	716.42	0.02	0.02	0.03	0.00
2	1000	1677439.68	282526.71	71.38	71.14	71.63	0.71
4	2000	62568.34	148500.26	85.63	85.96	85.30	0.86

△ Aborting and saving the final best model. Encountered exception: OutOfMemoryError('CUDA out of memory. Tried to allocate 216.00 MiB (GPU 0; 14.76 GiB total capacity; 12.89 GiB already allocated; 173.75 MiB free; 13.61 GiB reserved in total by PyTorch) If reserved memory is >> allocated memory try setting max\_split\_size\_mb to avoid fragmentation. See documentation for Memory Management and PYTORCH\_CUDA\_ALLOC\_CONF')

Traceback (most recent call last):

File "/usr/lib/python3.8/runpy.py", line 194, in \_run\_module\_as\_main  
return \_run\_code(code, main\_globals, None,  
File "/usr/lib/python3.8/runpy.py", line 87, in \_run\_code  
exec(code, run\_globals)  
File "/usr/local/lib/python3.8/dist-packages/spacy/\_\_main\_\_.py", line 4, in <module>  
setup\_cli()  
File "/usr/local/lib/python3.8/dist-packages/spacy/cli/\_util.py", line 71, in setup\_cli  
command(prog\_name=COMMAND)  
File "/usr/local/lib/python3.8/dist-packages/click/core.py", line 829, in \_\_call\_\_  
return self.main(\*args, \*\*kwargs)  
File "/usr/local/lib/python3.8/dist-packages/click/core.py", line 782, in main  
rv = self.invoke(ctx)  
File "/usr/local/lib/python3.8/dist-packages/click/core.py", line 1259, in invoke  
return \_process\_result(sub\_ctx.command.invoke(sub\_ctx))  
File "/usr/local/lib/python3.8/dist-packages/click/core.py", line 1066, in invoke  
return ctx.invoke(self.callback, \*\*ctx.params)  
File "/usr/local/lib/python3.8/dist-packages/click/core.py", line 610, in invoke  
return callback(\*args, \*\*kwargs)