

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

Mounted at /content/drive

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

/content/drive/MyDrive/legal-roberta-base-hyperparameter

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

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: 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: 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: 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: 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: 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: 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: 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)
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: 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)
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 73.8 MB/s
Collecting transformers<4.22.0,>=3.4.0
 Downloading transformers-4.21.3-py3-none-any.whl (4.7 MB)
 ██████████ 4.7 MB 97.5 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 2.4 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 81.1 MB/s
Requirement already satisfied: pyyaml>=5.1 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) (6.0)
Collecting tokenizers!=0.11.3,<0.13,>=0.11.1
 Downloading tokenizers-0.12.1-cp38-cp38-manylinux_2_12_x86_64.manylinux2010_x86_64.whl (6.6 MB)
 ██████████ 6.6 MB 85.5 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 huggingface-hub<1.0,>=0.1.0
 Downloading huggingface_hub-0.11.1-py3-none-any.whl (182 kB)
 ██████████ 182 kB 105.6 MB/s
Requirement already satisfied: regex!=2019.12.17 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) (2022.6.2)
Requirement already satisfied: MarkupSafe>=0.23 in /usr/local/lib/python3.8/dist-packages (from jinja2->spacy<3.3.0,>=3.2.2->en-legal-ner-trf==any) (2.0.1)
Installing collected packages: typer, pydantic, tokenizers, thinc, huggingface-hub, transformers, spacy-alignments, spacy, spacy-transformers, en-legal-ner-trf
 Attempting uninstall: typer
 Found existing installation: typer 0.7.0
 Uninstalling typer-0.7.0:
 Successfully uninstalled typer-0.7.0
 Attempting uninstall: pydantic
 Found existing installation: pydantic 1.10.2
 Uninstalling pydantic-1.10.2:
 Successfully uninstalled pydantic-1.10.2
 Attempting uninstall: thinc
 Found existing installation: thinc 8.1.5
 Uninstalling thinc-8.1.5:
 Successfully uninstalled thinc-8.1.5
 Attempting uninstall: spacy
 Found existing installation: spacy 3.4.3
 Uninstalling spacy-3.4.3:
 Successfully uninstalled spacy-3.4.3
ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the source of the following dependency conflicts.
en-core-web-sm 3.4.1 requires spacy<3.5.0,>=3.4.0, but you have spacy 3.2.4 which is incompatible.
Successfully installed en-legal-ner-trf-3.2.0 huggingface-hub-0.11.1 pydantic-1.8.2 spacy-3.2.4 spacy-alignments-0.8.6 spacy-transformers-1.1.7 thinc-8.0.17 tokenizers-0.12.1 transformers-4.20

```
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 5.1 MB/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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: packaging>=20.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (21.3)
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)
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: 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: click<8.1.0 in /usr/local/lib/python3.8/dist-packages (from spacy->-r requirements.txt (line 1)) (7.1.2)

```
!python3 example-doc.py

Seperating Preamble took 0.035166025161743164
Creating doc for judgement took 10.215424060821533
78
Creating doc for preamble took 0.4617483615875244
/content/drive/MyDrive/legal-roberta-base-hyperparameter/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 0.14765167236328125
```

```
!python -m spacy train training/config.cfg --output ./output --paths.train training/Combined_Data_Judgement_Preamble_spacy_format/train.spacy --paths.dev tr
```

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