

```
!pip install nltk spacy
!python -m spacy download en_core_web_sm
```

```
Requirement already satisfied: nltk in /usr/local/lib/python3.12/dist-packages (
Requirement already satisfied: spacy in /usr/local/lib/python3.12/dist-packages
Requirement already satisfied: click in /usr/local/lib/python3.12/dist-packages
Requirement already satisfied: joblib in /usr/local/lib/python3.12/dist-packages
Requirement already satisfied: regex<=2021.8.3 in /usr/local/lib/python3.12/dist
Requirement already satisfied: tqdm in /usr/local/lib/python3.12/dist-packages (
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.11 in /usr/local/lib/pyt
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/pyt
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/pytho
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.12/
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.1
Requirement already satisfied: thinc<8.4.0,>=8.3.4 in /usr/local/lib/python3.12/
Requirement already satisfied: wasabi<1.2.0,>=0.9.1 in /usr/local/lib/python3.12
Requirement already satisfied: srsly<3.0.0,>=2.4.3 in /usr/local/lib/python3.12/
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3
Requirement already satisfied: weasel<0.5.0,>=0.4.2 in /usr/local/lib/python3.12
Requirement already satisfied: typer-slim<1.0.0,>=0.3.0 in /usr/local/lib/python
Requirement already satisfied: numpy>=1.19.0 in /usr/local/lib/python3.12/dist-p
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3
Requirement already satisfied: pydantic!=1.8,!1.8.1,<3.0.0,>=1.7.4 in /usr/loca
Requirement already satisfied: jinja2 in /usr/local/lib/python3.12/dist-packages
Requirement already satisfied: setuptools in /usr/local/lib/python3.12/dist-pack
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.12/dist
Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.
Requirement already satisfied: pydantic-core==2.41.4 in /usr/local/lib/python3.1
Requirement already satisfied: typing-extensions>=4.14.1 in /usr/local/lib/pytho
Requirement already satisfied: typing-inspection>=0.4.2 in /usr/local/lib/python
Requirement already satisfied: charset_normalizer<4,>=2 in /usr/local/lib/python
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.12/dist-pa
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.12/d
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.12/d
Requirement already satisfied: blis<1.4.0,>=1.3.0 in /usr/local/lib/python3.12/d
Requirement already satisfied: confection<1.0.0,>=0.0.1 in /usr/local/lib/python
Requirement already satisfied: cloudpathlib<1.0.0,>=0.7.0 in /usr/local/lib/pyth
Requirement already satisfied: smart-open<8.0.0,>=5.2.1 in /usr/local/lib/python
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.12/dist
Requirement already satisfied: wrapt in /usr/local/lib/python3.12/dist-packages
Collecting en-core-web-sm==3.8.0
```

Downloading [https://github.com/explosion/spacy-models/releases/download/en\\_core\\_web\\_sm-3.8.0/en\\_core\\_web\\_sm-3.8.0.tar.gz](https://github.com/explosion/spacy-models/releases/download/en_core_web_sm-3.8.0/en_core_web_sm-3.8.0.tar.gz) 12.8/12.8 MB 101.8 MB/s eta 0:00:00

✓ Download and installation successful

You can now load the package via `spacy.load('en_core_web_sm')`

⚠ Restart to reload dependencies

If you are in a Jupyter or Colab notebook, you may need to restart Python in order to load all the package's dependencies. You can do this by selecting the 'Restart kernel' or 'Restart runtime' option.

```
text = "Artificial Intelligence is transforming industries across the world."
```

```
# Count number of words
words = text.split()
word_count = len(words)

print("Number of words:", word_count)
```

Number of words: 8

```
# Convert text to lowercase
lowercase_text = text.lower()

print("Lowercase text:")
print(lowercase_text)
```

Lowercase text:  
artificial intelligence is transforming industries across the world.