

```
# install required NLP libraries
!pip install nltk spacy
```

```
Collecting nltk
```

```
  Downloading nltk-0.1-py3-none-any.whl.metadata (1.6 kB)
```

```
Requirement already satisfied: spacy 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: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.12/
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: click>=8.0.0 in /usr/local/lib/python3.12/dist-pa
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
Downloading nltk-0.1-py3-none-any.whl (15 kB)
Installing collected packages: nltk
Successfully installed nltk-0.1
```

```
import nltk
import spacy
```

```
text = """Technology is rapidly changing the way people communicate.
Social media, emails, and instant messaging have made communication easier.
However, responsible use of technology is essential for a healthy digital life.
```

```
words = text.split()  
print("Word count:", len(words))
```

Word count: 29

```
lowercase_text = text.lower()  
print("\nLowercase text:\n", lowercase_text)
```

Lowercase text:
technology is rapidly changing the way people communicate.
social media, emails, and instant messaging have made communication faster.
however, responsible use of technology is essential for a healthy society.