

```
!wget https://nlp.stanford.edu/software/stanford-corenlp-4.2.2.zip
!wget https://nlp.stanford.edu/software/stanford-corenlp-4.2.2-models-english.jar
!unzip /content/stanford-corenlp-4.2.2.zip
```

```
extracting: stanford-corenlp-4.2.2/patterns/goldplaces.txt
inflating: stanford-corenlp-4.2.2/stanford-corenlp-4.2.2-sources.jar
inflating: stanford-corenlp-4.2.2/pom-java-11.xml
inflating: stanford-corenlp-4.2.2/input.txt.out
inflating: stanford-corenlp-4.2.2/LIBRARY-LICENSES
inflating: stanford-corenlp-4.2.2/istack-commons-runtime-3.0.7.jar
inflating: stanford-corenlp-4.2.2/build.xml
inflating: stanford-corenlp-4.2.2/jollyday.jar
inflating: stanford-corenlp-4.2.2/StanfordDependenciesManual.pdf
inflating: stanford-corenlp-4.2.2/javax.activation-api-1.2.0-sources.jar
inflating: stanford-corenlp-4.2.2/pom.xml
inflating: stanford-corenlp-4.2.2/javax.activation-api-1.2.0.jar
inflating: stanford-corenlp-4.2.2/LICENSE.txt
inflating: stanford-corenlp-4.2.2/jaxb-api-2.4.0-b180830.0359-sources.jar
inflating: stanford-corenlp-4.2.2/StanfordCoreNlpDemo.java
inflating: stanford-corenlp-4.2.2/joda-time-2.10.5-sources.jar
inflating: stanford-corenlp-4.2.2/ejml-simple-0.39-sources.jar
inflating: stanford-corenlp-4.2.2/ejml-ddense-0.39-sources.jar
creating: stanford-corenlp-4.2.2/sutime/
inflating: stanford-corenlp-4.2.2/sutime/english.sutime.txt
inflating: stanford-corenlp-4.2.2/sutime/spanish.sutime.txt
inflating: stanford-corenlp-4.2.2/sutime/british.sutime.txt
inflating: stanford-corenlp-4.2.2/sutime/english.holidays.sutime.txt
inflating: stanford-corenlp-4.2.2/sutime/defs.sutime.txt
inflating: stanford-corenlp-4.2.2/input.txt
inflating: stanford-corenlp-4.2.2/slf4j-simple.jar
inflating: stanford-corenlp-4.2.2/jaxb-impl-2.4.0-b180830.0438-sources.jar
inflating: stanford-corenlp-4.2.2/README.txt
inflating: stanford-corenlp-4.2.2/javax.json.jar
inflating: stanford-corenlp-4.2.2/jollyday-0.4.9-sources.jar
creating: stanford-corenlp-4.2.2/tokensregex/
inflating: stanford-corenlp-4.2.2/tokensregex/retokenize.txt
inflating: stanford-corenlp-4.2.2/tokensregex/color.input.txt
inflating: stanford-corenlp-4.2.2/tokensregex/color.properties
inflating: stanford-corenlp-4.2.2/tokensregex/color.rules.txt
inflating: stanford-corenlp-4.2.2/ejml-core-0.39-sources.jar
```

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inflating: stanford-corenlp-4.2.2/stanford-corenlp-4.2.2.jar
inflating: stanford-corenlp-4.2.2/joda-time.jar
inflating: stanford-corenlp-4.2.2/ejml-simple-0.39.jar
inflating: stanford-corenlp-4.2.2/CoreNLP-to-HTML.xsl
inflating: stanford-corenlp-4.2.2/xom.jar
inflating: stanford-corenlp-4.2.2/xom-1.3.2-sources.jar
inflating: stanford-corenlp-4.2.2/corenlp.sh
inflating: stanford-corenlp-4.2.2/RESOURCE-LICENSES
inflating: stanford-corenlp-4.2.2/input.txt.xml
inflating: stanford-corenlp-4.2.2/protobuf-java-3.11.4.jar
inflating: stanford-corenlp-4.2.2/Makefile
inflating: stanford-corenlp-4.2.2/ShiftReduceDemo.java
inflating: stanford-corenlp-4.2.2/javax.json-api-1.0-sources.jar
inflating: stanford-corenlp-4.2.2/stanford-corenlp-4.2.2-models.jar
inflating: stanford-corenlp-4.2.2/stanford-corenlp-4.2.2-javadoc.jar
inflating: stanford-corenlp-4.2.2/ejml-core-0.39.jar
inflating: stanford-corenlp-4.2.2/SemgrexDemo.java
inflating: stanford-corenlp-4.2.2/jaxb-impl-2.4.0-b180830.0438.jar
inflating: stanford-corenlp-4.2.2/jaxb-api-2.4.0-b180830.0359.jar
inflating: stanford-corenlp-4.2.2/slf4j-api.jar
inflating: stanford-corenlp-4.2.2/istack-commons-runtime-3.0.7-sources.jar
inflating: stanford-corenlp-4.2.2/ejml-ddense-0.39.jar
```

```
from nltk.parse.stanford import StanfordDependencyParser
```

```
jar_path = '/content/stanford-corenlp-4.2.2/stanford-corenlp-4.2.2.jar'
```

```
models_jar_path = '/content/stanford-corenlp-4.2.2-models-english.jar'
```

```
sentence = 'Cat sat on a mat in the garden'
```

```
parser = StanfordDependencyParser(path_to_jar = jar_path, path_to_models_jar = models_jar_path)
```

```
result = parser.raw_parse(sentence)
```

```
dependency = result.__next__()
```

```
print("{:<15} | {:<10} | {:<10} | {:<15} | {:<10}".format('Head', 'Head POS', 'Relation', 'Dependent', 'Dependent POS'))
print("-" * 75)
```

```

for dep in list(dependency.triples()):
    print ("{:<15} | {:<10} | {:<10} | {:<15} | {:<10}"
          .format(str(dep[0][0]),str(dep[0][1]), str(dep[1]), str(dep[2][0]),str(dep[2][1])))

```

Head	Head POS	Relation	Dependent	Dependent POS
sat	VBD	nsubj	Cat	NNP
sat	VBD	obl	mat	NN
mat	NN	case	on	IN
mat	NN	det	a	DT
mat	NN	nmod	garden	NN
garden	NN	case	in	IN
garden	NN	det	the	DT

```

from nltk.parse.stanford import StanfordDependencyParser

```

```

jar_path = '/content/stanford-corenlp-4.2.2/stanford-corenlp-4.2.2.jar'

```

```

models_jar_path = '/content/stanford-corenlp-4.2.2-models-english.jar'

```

```

sentence = 'Cows are grazing at a meadow near the river bank '

```

```

parser = StanfordDependencyParser(path_to_jar = jar_path, path_to_models_jar = models_jar_path)

```

```

result = parser.raw_parse(sentence)
dependency = result.__next__()

```

```

print ("{:<15} | {:<10} | {:<10} | {:<15} | {:<10}".format('Head', 'Head POS','Relation','Dependent', 'Dependent POS'))
print ("-" * 75)

```

```

for dep in list(dependency.triples()):
    print ("{:<15} | {:<10} | {:<10} | {:<15} | {:<10}"
          .format(str(dep[0][0]),str(dep[0][1]), str(dep[1]), str(dep[2][0]),str(dep[2][1])))

```

Head	Head POS	Relation	Dependent	Dependent POS
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grazing	VBG	nsubj	Cows	NNS
grazing	VBG	aux	are	VBP
grazing	VBG	obl	meadow	NN
meadow	NN	case	at	IN
meadow	NN	det	a	DT
meadow	NN	nmod	bank	NN
bank	NN	case	near	IN
bank	NN	det	the	DT
bank	NN	compound	river	NN