

Ex. NO : 5

NLP Task : Part of Speech Tagging and
information retrieval

9/9/25

Aim :

— By using NLP libraries to perform part
of speech tagging.

Program :

```
import pandas as pd
import re
import spacy

nlp = spacy.load("en-core-web-sm")

text = " AI - driven platforms personalise  
learning paths and help student grasp  
concepts ".

doc = nlp(text)

for token in doc :

    print { if " { token.text : 15 }
           -> { token.pos - 3" }

from sklearn.feature_extraction.text
import TfidfVectorizer

from sklearn.metrics.pairwise
import cosine_similarity.

documents = [

    " AI tools analyse student performance  
and provide - real time feedback".
```

query = "How does AI support students in learning?"

Corpus = documents + [query]

vectorizer = TfidfVectorizer()

tfidf-matrix = vectorizer.fit_transform(corpus)

similarities = cosine_similarity(tfidf-matrix(-1),
tfidf-matrix[:-1]).
flatten()

ranked-docs = sorted(zip(similarities,
documents), reverse=True)

print("\n Top relevant documents:\n")

for score, doc in ranked-docs:

print(f"Score: {score: 3} -> {doc}")

Result :

Thus, nlp performance has been executed successfully.