

# Next Article Recommender

## Package required:

1. Python3
2. Numpy
3. Pandas
4. Sklearn

## Code:

```
# Importing the required libraries
import numpy as np
import pandas as pd
from sklearn.feature_extraction.text import TfidfVectorizer
from sklearn.metrics.pairwise import sigmoid_kernel
import sys

# load the dataset
js = pd.read_csv("all_articles_blogs.csv", encoding='latin-1')

# function to preprocess the dataset
def preprocessing():

    # Model defination with the feature declaration
    tfv = TfidfVectorizer(min_df=3, max_features=None,
                          strip_accents='unicode', analyzer=
'word', token_pattern=r'\w{1,}',
                          ngram_range=(1, 5),
                          stop_words='english')

    # Filling NaNs with empty string
    js['ArticleTitle'] = js['ArticleTitle'].fillna('')
    tfv_matrix = tfv.fit_transform(js['ArticleTitle'])

    # Compute the sigmoid kernel
```

```

sig = sigmoid_kernel(tfv_matrix, tfv_matrix)

# Generate the indices for the recommender system, removing the duplicates
indices = pd.Series(js.index, index=js['ArticleFullPath']).drop_duplicates()

#returning the indices and sigmoid kernel matrix
return indices, sig

def give_rec(title):

    indices, sig = preprocessing()

    # Get the index corresponding to original_title
    idx = indices[title]

    # Get the pairwise similarity scores
    sig_scores = list(enumerate(sig[idx]))

    # Sort the Articles
    sig_scores = sorted(sig_scores, key=lambda x: x[1], reverse=True)

    # Scores of the 5 most similar articles
    sig_scores = sig_scores[1:6]

    # Movie indices
    movie_indices = [i[0] for i in sig_scores]

    # Top 10 most similar movies
    return js['ArticleFullPath'].iloc[movie_indices]

# recommender control logic
def recommender(link):
    result = give_rec(link)
    for i in result.index:
        print(js['ArticleFullPath'][i])

```

```
if __name__ == "__main__":  
    recommender(argv[1])
```

## Command to run the file

```
python3 demo.py https://www.c-sharpcorner.com/uploadfile/73d82f/collection-in-java/
```

## Output Demo

Java <https://www.c-sharpcorner.com/UploadFile/433c33/working-with-stack-class-of-collection-in-java/>

Java <https://www.c-sharpcorner.com/UploadFile/433c33/garbage-collection-in-java/>

Java <https://www.c-sharpcorner.com/UploadFile/3614a6/garbage-collection-in-java/>

Java <https://www.c-sharpcorner.com/article/garbage-collection-in-java/>

Java <https://www.c-sharpcorner.com/UploadFile/fd0172/working-with-collection-framework-in-java/>