

9xkydukfk

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```
[1]: import spacy
      from spacy.lang.en.stop_words import STOP_WORDS
      from string import punctuation
      import pandas as pd
```

```
[2]: txt=""

      try:
          with open('sample.txt', 'r') as file:
              content = file.read()
      except FileNotFoundError:
          print("File not found.")

      txt=content
```

```
[3]: len(txt)
```

```
[3]: 1536
```

```
[4]: nlp=spacy.load('en_core_web_sm')
```

```
[5]: doc=nlp(txt)
```

```
[6]: tokens=[token.text.lower() for token in doc if not token.is_stop and not token.
      ↪is_punct and token.text!='\n']
```

```
[7]: token1=[]
      stopwords=list(STOP_WORDS)
      allowed_pos=['ADJ', 'PROPN', 'VERB', 'NOUN']

      for token in doc:
          if token.text in stopwords or token.text in punctuation:
              continue
          if token.pos_ in allowed_pos:
              token1.append(token.text)

      print(token1)
```

```
['EW', 'DELHI', 'India', 'Monday', 'summoned', 'deputy', 'high', 'commissioner',
'Bangladesh', 'Nural', 'Islam', 'ongoing', 'border', 'fencing', 'row',
'Sukdevpur', 'Malda', 'Baishnabnagar', 'comes', 'day', 'Bangladesh', 'summoned',
'Indian', 'diplomat', 'Pranay', 'Verma', 'discuss', 'cooperative', 'approach',
'combating', 'crime', 'border', 'areas', 'understanding', 'fencing', 'border',
'security', 'purposes', 'border', 'forces', 'BSF', 'BGB', 'regular',
'communication', 'Pranay', 'Verma', 'Indian', 'high', 'commissioner',
'Bangladesh', 'told', 'reporters', 'meeting', 'expect', 'understanding',
'implemented', 'cooperative', 'approach', 'combating', 'crimes', 'border',
'said', 'Bangladesh', 'home', 'affairs', 'adviser', 'Jahangir', 'Alam',
'Chowdhury', 'blamed', 'ongoing', 'border', 'tensions', 'unequal', 'agreements',
'previous', 'government', 'tenure', 'saying', 'deals', 'caused', 'multiple',
'complications', 'India', 'Bangladesh', 'border', 'unequal', 'agreements',
'signed', 'previous', 'government', 'tenure', 'issues', 'arisen', 'Bangladesh',
'India', 'border', 'said', 'Tensions', 'escalated', 'week', 'Border',
'Security', 'Force', 'BSF', 'faced', 'objections', 'Border', 'Guard',
'Bangladesh', 'BGB', 'attempting', 'install', 'single', 'row', 'barbed', 'wire',
'fencing', 'Sukdevpur', 'Malda', 'Baishnabnagar', 'growing', 'concerns',
'infiltration', 'fencing', 'work', 'resumed', 'Tuesday', 'halted', 'following',
'flag', 'meeting', 'forces', 'suspended']
```

```
[8]: from collections import Counter
word_freq=Counter(tokens)
```

```
[9]: max_freq=max(word_freq.values())
max_freq
```

```
[9]: 10
```

```
[10]: for word in word_freq.keys():
        word_freq[word]=word_freq[word]/max_freq
```

0.1 text comprehension

```
[11]: sent_token=[sent.text for sent in doc.sents]
```

```
[12]: sent_token
```

```
[12]: ["EW DELHI: India on Monday summoned deputy high commissioner of Bangladesh,
Nural Islam, amid the ongoing border fencing row at Sukdevpur in Malda's
Baishnabnagar.\n",
'This comes a day after Bangladesh summoned Indian diplomat Pranay Verma to
discuss a "cooperative approach to combating crime" in the border areas.\n\n',
'We have an understanding regarding fencing the border for security purposes,
and the two border forces, BSF and BGB, have been in regular communication,"
Pranay Verma, Indian high commissioner to Bangladesh, had told reporters after
meeting.\n\n',
```

'We expect that this understanding will be implemented and there will be a cooperative approach to combating crimes along the border," he had said.\n',
 'Meanwhile, Bangladesh\'s home affairs adviser Jahangir Alam Chowdhury blamed the ongoing border tensions on "unequal agreements" made during the previous government\'s tenure, saying that these deals have caused multiple complications along the India-Bangladesh border.\n',
 '"Due to some unequal agreements signed during the previous government\'s tenure, several issues have arisen along the Bangladesh-India border," he had said.\n',
 "Tensions escalated last week as the Border Security Force (BSF) faced objections from the Border Guard Bangladesh (BGB) while attempting to install single-row barbed wire fencing at Sukdevpur in Malda's Baishnabnagar, amid growing concerns over infiltration.\n",
 'Although fencing work briefly resumed on Tuesday, it was halted again following a flag meeting between the two forces and has remained suspended since.']

```
[13]: def remove_last(str):
      l=len(str)

      cnt=0
      while l>=0 and str[l-1]=='\n':
          cnt+=1
          l-=1

      str=str[:-cnt]
      return str
```

```
[14]: sent_score={}
      for sente in sent_token:
          sent=remove_last(sente)
          for word in sent.split():
              if word.lower() in word_freq.keys():
                  if sent not in sent_score.keys():
                      sent_score[sent]=word_freq[word]
              else:
                  sent_score[sent]+=word_freq[word]
```

```
[15]: sent_score
```

```
[15]: {"EW DELHI: India on Monday summoned deputy high commissioner of Bangladesh,
      Nural Islam, amid the ongoing border fencing row at Sukdevpur in Malda's
      Baishnabnagar.": 2.6999999999999997,
      'This comes a day after Bangladesh summoned Indian diplomat Pranay Verma to
      discuss a "cooperative approach to combating crime" in the border areas.': 2.0,
      'We have an understanding regarding fencing the border for security purposes,
      and the two border forces, BSF and BGB, have been in regular communication,"
```

Pranay Verma, Indian high commissioner to Bangladesh, had told reporters after meeting.': 3.5000000000000004,

'We expect that this understanding will be implemented and there will be a cooperative approach to combating crimes along the border," he had said.': 1.1,

'Meanwhile, Bangladesh\'s home affairs adviser Jahangir Alam Chowdhury blamed the ongoing border tensions on "unequal agreements" made during the previous government\'s tenure, saying that these deals have caused multiple complications along the India-Bangladesh border.': 2.5000000000000004,

"Due to some unequal agreements signed during the previous government\'s tenure, several issues have arisen along the Bangladesh-India border," he had said.': 0.8999999999999999,

"Tensions escalated last week as the Border Security Force (BSF) faced objections from the Border Guard Bangladesh (BGB) while attempting to install single-row barbed wire fencing at Sukdevpur in Malda's Baishnabnagar, amid growing concerns over infiltration.": 1.6}

```
[16]: df=pd.DataFrame(list(sent_score.items()),columns=['Sentence','Score'])
```

```
[17]: df.head(10)
```

```
[17]:
```

	Sentence	Score
0	EW DELHI: India on Monday summoned deputy high...	2.7
1	This comes a day after Bangladesh summoned Ind...	2.0
2	We have an understanding regarding fencing the...	3.5
3	We expect that this understanding will be impl...	1.1
4	Meanwhile, Bangladesh's home affairs adviser J...	2.5
5	"Due to some unequal agreements signed during ...	0.9
6	Tensions escalated last week as the Border Sec...	1.6

```
[18]: from heapq import nlargest
```

```
[19]: num_sentences=5
nsent=nlargest(num_sentences,sent_score,key=sent_score.get)
```

```
[20]: " ".join(nsent)
```

```
[20]: 'We have an understanding regarding fencing the border for security purposes,
and the two border forces, BSF and BGB, have been in regular communication,"
Pranay Verma, Indian high commissioner to Bangladesh, had told reporters after
meeting. EW DELHI: India on Monday summoned deputy high commissioner of
Bangladesh, Nural Islam, amid the ongoing border fencing row at Sukdevpur in
Malda\'s Baishnabnagar. Meanwhile, Bangladesh\'s home affairs adviser Jahangir
Alam Chowdhury blamed the ongoing border tensions on "unequal agreements" made
during the previous government\'s tenure, saying that these deals have caused
multiple complications along the India-Bangladesh border. This comes a day after
Bangladesh summoned Indian diplomat Pranay Verma to discuss a "cooperative
approach to combating crime" in the border areas. Tensions escalated last week
```

as the Border Security Force (BSF) faced objections from the Border Guard Bangladesh (BGB) while attempting to install single-row barbed wire fencing at Sukdevpur in Malda\'s Baishnabnagar, amid growing concerns over infiltration.'

0.2 abstractive text summarization

```
[22]: from transformers import pipeline
```

```
[25]: summarizer=pipeline('summarization',model='t5-base',tokenizer='t5-base',framework='pt')
```

Device set to use cpu

```
[26]: summary=summarizer(txt,max_length=150,min_length=50,do_sample=False)
```

```
[27]: summary
```

```
[27]: [{'summary_text': 'india summons deputy high commissioner of Bangladesh, Nural Islam, amid ongoing border fencing row . this comes a day after Bangladesh summons Indian diplomat Pranay Verma . tensions escalated last week as border security force faced objections from border guard .'}]
```

```
[29]: print(summary[0]['summary_text'])
```

india summons deputy high commissioner of Bangladesh, Nural Islam, amid ongoing border fencing row . this comes a day after Bangladesh summons Indian diplomat Pranay Verma . tensions escalated last week as border security force faced objections from border guard .

```
[ ]:
```