artikel·=·"""Most Americans now carry some immune protection, experts said, whether from vacc

For two years, the coronavirus killed Americans on a brutal, predictable schedule: A few week

But that pattern appears to have changed. Nearly three months since an ultra-contagious set o

The spread of the virus and the number of deaths in its wake, two measures that were once yok

Because so many Americans have now been vaccinated or infected or both, they said, the number

"In previous waves, there were still substantial pockets of people who had not been vaccinate

That turn in the pandemic has nevertheless left many Americans behind.

Older people make up a larger share of Covid deaths than they did last year. The virus contin

Covid is still killing an average of 314 people daily, one-tenth the number who were dying ev

With the country's resources for fighting the virus drying up and many Americans forgoing boo

"As the time since people got vaccinated becomes longer and longer, the efficacy of the immun

The link between Covid cases and deaths started weakening over the winter, scientists said, b

This spring, Covid has been killing fewer Americans daily than during any period except the s

By some estimates, the case fatality rate — the share of recorded Covid cases that prove dead

To account for those problems, Dr. Dowdy looked at the proportion of reported test results th

By his rough calculations, Dr. Dowdy estimated that the ratio of deaths to test positivity fe

"What we're seeing is that the average case of Covid-19 is becoming much milder," he said.

That is a better reflection of gains in immunity than it is of any intrinsic weakening of the

The country paid a staggering price: Some 200,000 people were killed by Covid this winter and

"Our level of community immunity heading into this wave was much higher than it's ever been d

In the Northeast, where the Omicron subvariants first took hold this spring, deaths climbed a

But across the United States, where cases have been climbing since early April, deaths have r

"I think it's somewhat reassuring that deaths didn't really spike as they had during earlier

Virginia Pitzer, an epidemiologist at the Yale School of Public Health, said that shift stemm

In a country as large as the United States, every Covid wave is also a collection of staggere

Some states have also moved from reporting Covid deaths daily to doing so weekly, and they ha

And some states said that so many residents had died from Covid this winter that it took them

"Our surveillance system in the U.S. is not as strong as it should be or could be," Dr. Geral

There are a number of possible reasons that Covid deaths have not fallen even further. With i

The country's stagnant booster campaign has also left many older people at a long distance fr

"Overall, the people who've been coming through with Covid are much, much less sick than they

Disparities in access to booster shots and antiviral pills have also put some Americans at hi

The number of hospitalized Covid patients is still climbing nationally, making it likely that

"Unfortunately, vaccination rates in many southern states are among the lowest in the country

Even as fewer cases turn deadly, the unprecedented number of infections this winter and sprin

Dr. Karan, of Stanford, said that he had lingering symptoms from a January bout with Covid un

In the Northeast, where cases have been falling for several weeks, Dr. Ranney said that Covid

They had also been presenting differently, she said. In previous surges, patients' most press

"This wave feels qualitatively and quantitatively different," Dr. Ranney said. "We're not see

print(artikel)

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```python
#Case Folding
# dengan fungsi lower() yang sudah disediakan oleh Python
artikel = artikel.lower()

# coba tampilkan hasilnya
print(artikel)
```

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```python
# Menghapus Tanda Baca
# import library regex
import re
import string

#hapus angka
#artikel = re.sub(r"\d+", "", artikel)

#hapus punctuation
artikel = artikel.translate(str.maketrans("","",string.punctuation))
```

```python
artikel = artikel.translate(str.maketrans('','',string.punctuation))

#hapus whitespace leading & trailing
artikel = artikel.strip()

#hapus multiple whitespace into single whitespace
artikel = re.sub('\s+',' ',artikel)

# tampilkan hasilnya
print(artikel)
```

    lictable schedule a few weeks after infections climbed so did deaths cutting an unforgivi

```python
#TOKENISASI
# import library nltk
import nltk
# download package punkt -> punctuation nltk
nltk.download('punkt')

# lakukan tokenisasi
tokens = nltk.tokenize.word_tokenize(artikel)

# coba tampilkan hasilnya
print(tokens)
```

    ⤷   punkt to /root/nltk_data...
         ers/punkt.zip.
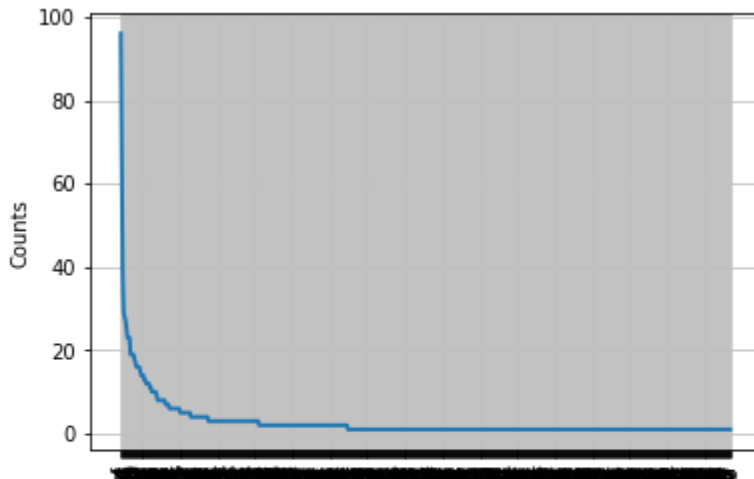   arry', 'some', 'immune', 'protection', 'experts', 'said', 'whether', 'from', 'vaccines',

```python
#Menampilkan frekuensi token
# import nltk
import nltk

frekuensi_token = nltk.FreqDist(tokens)
print(frekuensi_token.most_common())
```

    [('the', 96), ('of', 66), ('in', 38), ('and', 29), ('to', 28), ('that', 27), ('covid', 2

```python
frekuensi_token.plot()
```

```python
# Stopword Removal
# import nltk
import nltk

# download package punkt -> punctuation nltk
nltk.download('punkt')

# import stopwords
from nltk.corpus import stopwords

# download stopwords
nltk.download('stopwords')

# lakukan tokenisasi
tokens = nltk.tokenize.word_tokenize(artikel)

# stopwords dalam bahasa Inggris
stopwords_set = set(stopwords.words('english'))

# siapkan untuk menampung hasil setelah stopwords dibuang
token_setelah_stopword = []

# siapkan untuk menampung token yang dianggap stopwords
token_stopword = []

# cek semua token
for token in tokens:
    if token in stopwords_set:  # berarti termasuk stopword
        token_stopword.append(token)
    else:
        token_setelah_stopword.append(token)

# token-token yang termasuk stopword
print(token_stopword)

# token-token yang bukan stopword (dipakai untuk tahap berikutnya)
print(token_setelah_stopword)
```
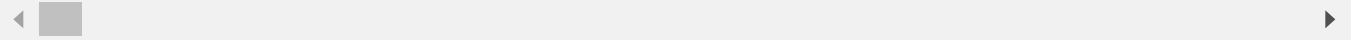
```
['most', 'now', 'some', 'from', 'or', 'both', 'for', 'the', 'on', 'a', 'a', 'few', 'afte
['americans', 'carry', 'immune', 'protection', 'experts', 'said', 'whether', 'vaccines',
[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data]   Package punkt is already up-to-date!
[nltk_data] Downloading package stopwords to /root/nltk_data...
[nltk_data]   Unzipping corpora/stopwords.zip.
```
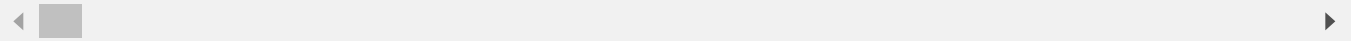
```python
#Stemming
from nltk.stem import PorterStemmer
porter = PorterStemmer()

hasil_stemming_porter = [porter.stem(word) for word in token_setelah_stopword]
print(hasil_stemming_porter)
```

```
['american', 'carri', 'immun', 'protect', 'expert', 'said', 'whether', 'vaccin', 'infect
```
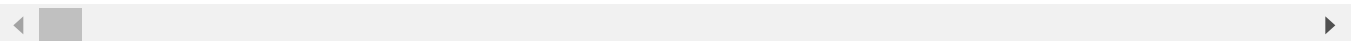
```python
#Lemmatization
import nltk
from nltk.stem import WordNetLemmatizer
nltk.download('wordnet')
nltk.download('omw-1.4')

wordnet_lemmatizer = WordNetLemmatizer()
hasil_lemmatization = [wordnet_lemmatizer.lemmatize(word) for word in token_setelah_stopword]
print(hasil_lemmatization)
```

```
[nltk_data] Downloading package wordnet to /root/nltk_data...
[nltk_data]   Package wordnet is already up-to-date!
[nltk_data] Downloading package omw-1.4 to /root/nltk_data...
[nltk_data]   Unzipping corpora/omw-1.4.zip.
['american', 'carry', 'immune', 'protection', 'expert', 'said', 'whether', 'vaccine', 'i
```

```python
from nltk.tag import pos_tag
from nltk.tokenize import word_tokenize


import nltk
nltk.download('averaged_perceptron_tagger')

def postag(str_data) :
  tok_sentence = nltk.word_tokenize(str_data)
  tagged_sentence = nltk.pos_tag(tok_sentence)
  return tagged_sentence

temp = postag(artikel)
print(temp)
```

[('most', 'JJS'), ('americans', 'NNS'), ('now', 'RB'), ('carry', 'VBP'), ('some', 'DT'),

✓ 0s   completed at 8:44 PM   ● ✕