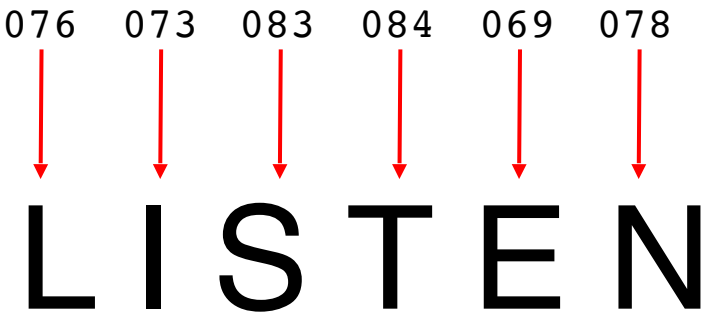
Copyright Notice

L I S T E N



ASCII ENCODING

083 073 076 069 078 084

S I L E N T

076 073 083 084 069 078

L I S T E N

I love my dog

I love my dog

001

I love my dog

001 002 003 004

ORDER NUMBER ENCODING

I love my dog

001 002 003 004

I love my cat

I love my dog

001 002 003 004

I love my cat

001 002 003

I love my dog

001 002 003 004

I love my cat

001 002 003 005

001	002	003	004
001	002	003	005

```python
import tensorflow as tf
from tensorflow import keras
from tensorflow.keras.preprocessing.text import Tokenizer

sentences = [
    'I love my dog',
    'I love my cat'
]

tokenizer = Tokenizer(num_words = 100)
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index
print(word_index)
```

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```

=> Import Tokenizer class

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print(word_index)
```

=> set num_words = <val>

take top <val> words by volume and encoding those

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word_index = tokenizer.word_index
print(word_index)
```

=> encoding process

```python
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from tensorflow import keras
from tensorflow.keras.preprocessing.text import Tokenizer

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]

tokenizer = Tokenizer(num_words = 100)
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index
print(word_index)
```

=> return encoding result
as dictionary, including keys & values

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from tensorflow.keras.preprocessing.text import Tokenizer

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    'I love my dog',
    'I love my cat'
]

tokenizer = Tokenizer(num_words = 100)
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index
print(word_index)
```

```
{'i': 1, 'my': 3, 'dog': 4, 'cat': 5, 'love': 2}
```

```
sentences = [
    'I love my dog',
    'I love my cat',
    'You love my dog!'
]
```

```
sentences = [
    'I love my dog',
    'I love my cat',
    'You love my dog!'
]
```

NOTE

exclamation '!'

=> have new key - 'you'

{'i': 3, 'my': 2, 'you': 6, 'love': 1, 'cat': 5, 'dog': 4}

=> The key is still 'dog'
no exclamation included.

{'i': 3, 'my': 2, 'you': 6, 'love': 1, 'cat': 5, 'dog': 4}

{'i': 3, 'my': 2, 'you': 6, 'love': 1, 'cat': 5, 'dog': 4}

```python
from tensorflow.keras.preprocessing.text import Tokenizer

sentences = [
    'I love my dog',
    'I love my cat',
    'You love my dog!',
    'Do you think my dog is amazing?'
]

tokenizer = Tokenizer(num_words = 100)
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

print(word_index)
print(sequences)
```

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tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

print(word_index)
print(sequences)
```

=> return the set of sequences
(set of values in dictionary)

```
{'amazing': 10, 'dog': 3, 'you': 5, 'cat': 6,
 'think': 8, 'i': 4, 'is': 9, 'my': 1, 'do': 7,
 'love': 2}
```

```
[[4, 2, 1, 3], [4, 2, 1, 6], [5, 2, 1, 3], [7, 5, 8, 1, 3, 9, 10]]
```

{'amazing': 10, 'dog': 3, 'you': 5, 'cat': 6,
'think': 8, 'i': 4, 'is': 9, 'my': 1, 'do': 7,
'love': 2}

[[4, 2, 1, 3], [4, 2, 1, 6], [5, 2, 1, 3], [7, 5, 8, 1, 3, 9, 10]]

```
{'amazing': 10, 'dog': 3, 'you': 5, 'cat': 6,
 'think': 8, 'i': 4, 'is': 9, 'my': 1, 'do': 7,
 'love': 2}
```

```
[[4, 2, 1, 3], [4, 2, 1, 6], [5, 2, 1, 3], [7, 5, 8, 1, 3, 9, 10]]
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```python
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word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

print(word_index)
print(sequences)
```

```
test_data = [
    'i really love my dog',
    'my dog loves my manatee'
]

test_seq = tokenizer.texts_to_sequences(test_data)
print(test_seq)
```

```python
test_data = [
    'i really love my dog',
    'my dog loves my manatee'
]

test_seq = tokenizer.texts_to_sequences(test_data)
print(test_seq)
```

```
[[4, 2, 1, 3], [1, 3, 1]]
```

```
{'think': 8, 'amazing': 10, 'my': 1, 'love': 2, 'dog': 3, 'is': 9, 'you': 5, 'do': 7, 'cat': 6, 'i': 4}
```

```
test_data = [
    'i really love my dog',
    'my dog loves my manatee'
]

test_seq = tokenizer.texts_to_sequences(test_data)
print(test_seq)
```

[[4, 2, 1, 3], [1, 3, 1]]

=> 'really' token has been lost as well as 'manatee'

{'think': 8, 'amazing': 10, 'my': 1, 'love': 2, 'dog': 3, 'is': 9, 'you': 5, 'do': 7, 'cat': 6, 'i': 4}

```python
test_data = [
    'i really love my dog',
    'my dog loves my manatee'
]

test_seq = tokenizer.texts_to_sequences(test_data)
print(test_seq)
```

```
[[4, 2, 1, 3], [1, 3, 1]]
```

```
{'think': 8, 'amazing': 10, 'my': 1, 'love': 2, 'dog': 3, 'is': 9, 'you': 5, 'do': 7, 'cat': 6, 'i': 4}
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```python
from tensorflow.keras.preprocessing.text import Tokenizer

sentences = [
    'I love my dog',
    'I love my cat',
    'You love my dog!',
    'Do you think my dog is amazing?'
]

tokenizer = Tokenizer(num_words = 100, oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

test_data = [
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word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

test_data = [
    'i really love my dog',
    'my dog loves my manatee'
]

test_seq = tokenizer.texts_to_sequences(test_data)
print(test_seq)
```

[[5, 1, 3, 2, 4], [2, 4, 1, 2, 1]]

{'think': 9, 'amazing': 11, 'dog': 4, 'do': 8, 'i': 5, 'cat': 7,
'you': 6, 'love': 3, '<OOV>': 1, 'my': 2, 'is': 10}

Padding can solve this problem

```python
from tensorflow.keras.preprocessing.text import Tokenizer
from tensorflow.keras.preprocessing.sequence import pad_sequences

sentences = [
    'I love my dog',
    'I love my cat',
    'You love my dog!',
    'Do you think my dog is amazing?'
]

tokenizer = Tokenizer(num_words = 100, oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

padded = pad_sequences(sequences)
print(word_index)
print(sequences)
print(padded)
```

```python
from tensorflow.keras.preprocessing.text import Tokenizer
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sentences = [
    'I love my dog',
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]

tokenizer = Tokenizer(num_words = 100, oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

padded = pad_sequences(sequences)
print(word_index)
print(sequences)
print(padded)
```

=> import padding

```python
from tensorflow.keras.preprocessing.text import Tokenizer
from tensorflow.keras.preprocessing.sequence import pad_sequences

sentences = [
    'I love my dog',
    'I love my cat',
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]

tokenizer = Tokenizer(num_words = 100, oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)

padded = pad_sequences(sequences)
print(word_index)
print(sequences)
print(padded)
```

```
{'do': 8, 'you': 6, 'love': 3, 'i': 5, 'amazing': 11, 'my': 2, 'is': 10, 'think': 9, 'dog': 4, '<OOV>': 1, 'cat': 7}
```

```
[[5, 3, 2, 4], [5, 3, 2, 7], [6, 3, 2, 4], [8, 6, 9, 2, 4, 10, 11]]
```

```
[[ 0  0  0  5  3  2  4]
 [ 0  0  0  5  3  2  7]
 [ 0  0  0  6  3  2  4]
 [ 8  6  9  2  4 10 11]]
```

{'do': 8, 'you': 6, 'love': 3, 'i': 5, 'amazing': 11, 'my': 2, 'is': 10, 'think': 9, 'dog': 4, '<OOV>': 1, 'cat': 7}

[[5, 3, 2, 4], [5, 3, 2, 7], [6, 3, 2, 4], [8, 6, 9, 2, 4, 10, 11]]

```
[[ 0  0  0  5  3  2  4]
 [ 0  0  0  5  3  2  7]
 [ 0  0  0  6  3  2  4]
 [ 8  6  9  2  4 10 11]]
```

```
{'do': 8, 'you': 6, 'love': 3, 'i': 5, 'amazing': 11, 'my': 2, 'is': 10, 'think': 9, 'dog': 4, '<OOV>': 1, 'cat': 7}
```

```
[[5, 3, 2, 4], [5, 3, 2, 7], [6, 3, 2, 4], [8, 6, 9, 2, 4, 10, 11]]
```

```
[[ 0  0  0  5  3  2  4]
 [ 0  0  0  5  3  2  7]
 [ 0  0  0  6  3  2  4]
 [ 8  6  9  2  4 10 11]]
```

```
padded = pad_sequences(sequences, padding='post')
```

```
padded = pad_sequences(sequences, padding='post', maxlen=5)
```

maxlen: maximum letters in a sentence

```
padded = pad_sequences(sequences, padding='post',
                                    truncating='post', maxlen=5)
```

Sarcasm in News Headlines Dataset by Rishabh Misra

https://rishabhmisra.github.io/publications/

Dataset

154

News Headlines Dataset For Sarcasm Detection

High quality dataset for the task of Sarcasm Detection

Rishabh Misra • updated a year ago (Version 1)

Data | Kernels (39) | Discussion (2) | Activity | Metadata | Download (2 MB) | New Kernel

CC0: Public Domain

classification, deep learning, nlp, linguistics

Description

Context

Past studies in Sarcasm Detection mostly make use of Twitter datasets collected using hashtag based supervision but such datasets are noisy in terms of labels and language. Furthermore, many tweets are replies to other tweets and detecting sarcasm in these requires the availability of contextual tweets.

To overcome the limitations related to noise in Twitter datasets, this **News Headlines dataset for Sarcasm Detection** is collected from two news website. *TheOnion* aims at producing sarcastic versions of current events and we collected all the headlines from News in Brief and News in Photos categories (which are sarcastic). We collect real (and non-sarcastic) news headlines from *HuffPost*.

This new dataset has following advantages over the existing Twitter datasets:

- Since news headlines are written by professionals in a formal manner, there are no spelling mistakes and informal usage. This reduces the sparsity and also increases the chance of finding pre-trained embeddings.
- Furthermore, since the sole purpose of *TheOnion* is to publish sarcastic news, we get high-quality labels with much less noise as compared to Twitter datasets.
- Unlike tweets which are replies to other tweets, the news headlines we obtained are self-contained. This would help us in teasing apart the real sarcastic elements.

Content

Each record consists of three attributes:

- `is_sarcastic` : 1 if the record is sarcastic otherwise 0
- `headline` : the headline of the news article
- `article_link` : link to the original news article. Useful in collecting supplementary data

is_sarcastic: 1 if the record is sarcastic otherwise 0

headline: the headline of the news article

article_link: link to the original news article. Useful in collecting supplementary data

{"article_link": "https://politics.theonion.com/boehner-just-wants-wife-to-listen-not-come-up-with-alt-1819574302", "headline": "boehner just wants wife to listen, not come up with alternative debt-reduction ideas", "is_sarcastic": 1}

{"article_link": "https://www.huffingtonpost.com/entry/roseanne-revival-review_us_5ab3a497e4b054d118e04365", "headline": "the 'roseanne' revival catches up to our thorny political mood, for better and worse", "is_sarcastic": 0}

{"article_link": "https://local.theonion.com/mom-starting-to-fear-son-s-web-series-closest-thing-she-1819576697", "headline": "mom starting to fear son's web series closest thing she will have to grandchild", "is_sarcastic": 1}

[

{"article_link": "https://politics.theonion.com/boehner-just-wants-wife-to-listen-not-come-up-with-alt-1819574302", "headline": "boehner just wants wife to listen, not come up with alternative debt-reduction ideas", "is_sarcastic": 1},

{"article_link": "https://www.huffingtonpost.com/entry/roseanne-revival-review_us_5ab3a497e4b054d118e04365", "headline": "the 'roseanne' revival catches up to our thorny political mood, for better and worse", "is_sarcastic": 0},

{"article_link": "https://local.theonion.com/mom-starting-to-fear-son-s-web-series-closest-thing-she-1819576697", "headline": "mom starting to fear son's web series closest thing she will have to grandchild", "is_sarcastic": 1}

]

```python
import json   => load and read json file

with open("sarcasm.json", 'r') as f:
    datastore = json.load(f)

sentences = []
labels = []
urls = []
for item in datastore:
    sentences.append(item['headline'])
    labels.append(item['is_sarcastic'])
    urls.append(item['article_link'])
```

```python
import json

with open("sarcasm.json", 'r') as f:
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    sentences.append(item['headline'])
    labels.append(item['is_sarcastic'])
    urls.append(item['article_link'])
```

=> read file json function

json file includes headlines, URL and labels

```python
import json

with open("sarcasm.json", 'r') as f:
    datastore = json.load(f)

sentences = []
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for item in datastore:
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urls = []
for item in datastore:
    sentences.append(item['headline'])
    labels.append(item['is_sarcastic'])
    urls.append(item['article_link'])
```

=> add to list

```python
from tensorflow.keras.preprocessing.text import Tokenizer
from tensorflow.keras.preprocessing.sequence import pad_sequences
tokenizer = Tokenizer(oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)
padded = pad_sequences(sequences, padding='post')
print(padded[0])
print(padded.shape)
```

```python
from tensorflow.keras.preprocessing.text import Tokenizer
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tokenizer = Tokenizer(oov_token="<OOV>")
tokenizer.fit_on_texts(sentences)
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word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)
padded = pad_sequences(sequences, padding='post')
print(padded[0])
print(padded.shape)
```

{'underwood': 24127, 'skillingsbolle': 23055, 'grabs': 12293, 'mobility': 8909, "'assassin's": 12648, 'visualize': 23973, 'hurting': 4992, 'orphaned': 9173, "'agreed'": 24365, 'narration': 28470

```python
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word_index = tokenizer.word_index

sequences = tokenizer.texts_to_sequences(sentences)
padded = pad_sequences(sequences, padding='post')
print(padded[0])
print(padded.shape)
```

```
[  308 15115   679  3337  2298    48   382  2576 15116     6  2577  8434
     0     0     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0     0     0
     0     0     0     0]
```

(26709, 40)

```
 308 15115   679  3337  2298    48   382  2576 15116     6  2577  8434
   0     0     0     0     0     0     0     0     0     0     0     0
   0     0     0     0     0     0     0     0     0     0     0     0
   0     0     0     0]
```

(26709, 40)

```
[  308 15115   679  3337  2298    48   382  2576 15116     6  2577  8434
     0     0     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0     0     0
     0     0     0     0]
```

```
(26709, 40)
```