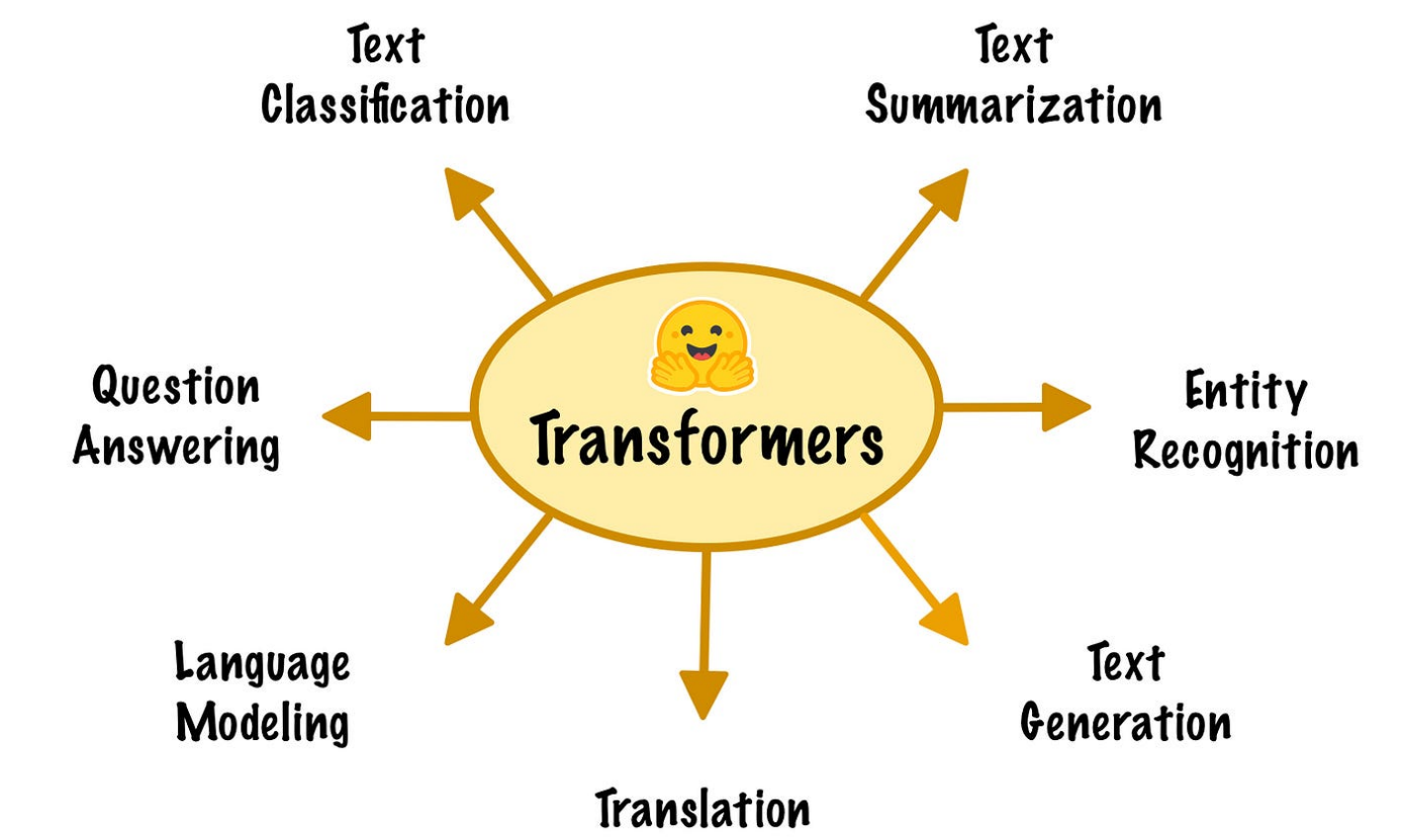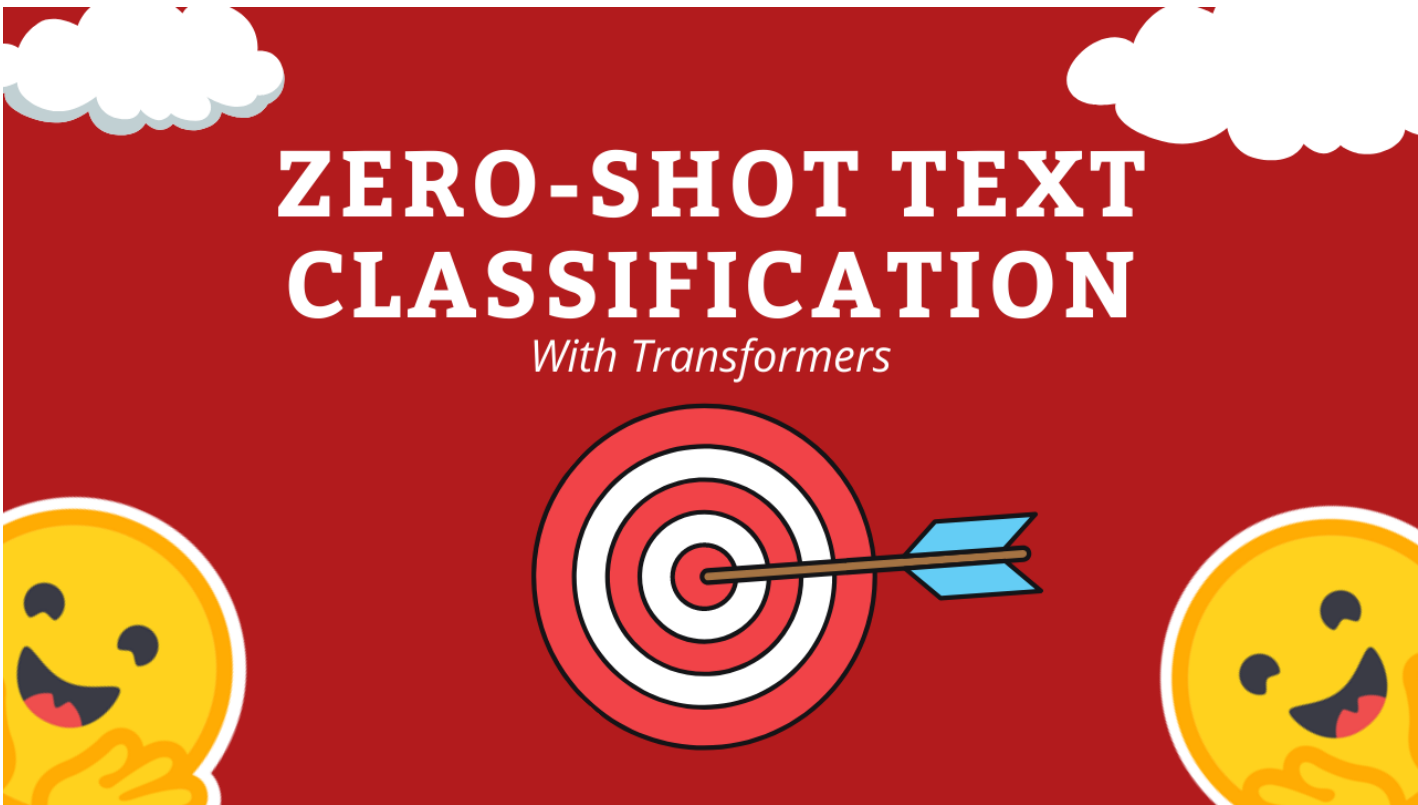```
import warnings
warnings.filterwarnings("ignore")
```



```
!pip install transformers
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: transformers in /usr/local/lib/python3.9/dist-packages (4.27.1)
Requirement already satisfied: tokenizers!=0.11.3,<0.14,>=0.11.1 in /usr/local/lib/python3.9/dist-packages (from transformers) (0.13.2)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.9/dist-packages (from transformers) (23.0)
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.9/dist-packages (from transformers) (6.0)
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.9/dist-packages (from transformers) (4.65.0)
Requirement already satisfied: requests in /usr/local/lib/python3.9/dist-packages (from transformers) (2.25.1)
Requirement already satisfied: numpy>=1.17 in /usr/local/lib/python3.9/dist-packages (from transformers) (1.22.4)
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.9/dist-packages (from transformers) (2022.6.2)
Requirement already satisfied: huggingface-hub<1.0,>=0.11.0 in /usr/local/lib/python3.9/dist-packages (from transformers) (0.13.2)
Requirement already satisfied: filelock in /usr/local/lib/python3.9/dist-packages (from transformers) (3.9.1)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.9/dist-packages (from huggingface-hub<1.0,>=0.11.0->transformers) (4.5.0)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.9/dist-packages (from requests->transformers) (2022.12.7)
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.9/dist-packages (from requests->transformers) (2.10)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in /usr/local/lib/python3.9/dist-packages (from requests->transformers) (1.26.15)
Requirement already satisfied: chardet<5,>=3.0.2 in /usr/local/lib/python3.9/dist-packages (from requests->transformers) (4.0.0)
```

Importing all the necessary libraries,transformer and zero shot classifier


```
import pandas as pd
from transformers import pipeline
classifier=pipeline("zero-shot-classification",device=0)
```

```
No model was supplied, defaulted to facebook/bart-large-mnli and revision c626438 (https://huggingface.co/facebook/bart-large-mnli).
Using a pipeline without specifying a model name and revision in production is not recommended.
```

Reading the dataset

```
df=pd.read_csv("/content/newsword_new.csv")
df.head(10)
```

	publish_date	headline_category	headline_text	
0	20010102	unknown	Status quo will not be disturbed at Ayodhya; s...	
1	20010102	unknown	Fissures in Hurriyat over Pak visit	
2	20010102	unknown	America's unwanted heading for India?	
3	20010102	unknown	For bigwigs; it is destination Goa	
4	20010102	unknown	Extra buses to clear tourist traffic	
5	20010102	unknown	Dilute the power of transfers; says Riberio	
6	20010102	unknown	Focus shifts to teaching of Hindi	
7	20010102	unknown	IT will become compulsory in schools	
8	20010102	unknown	Move to stop freedom fighters' pension flayed	

```
samples=df
```

```
strings=samples.headline_text.values
```

```
sequence=list(strings)
print(sequence)
```

```
['Status quo will not be disturbed at Ayodhya; says Vajpayee', 'Fissures in Hurriyat over Pak visit', "America's unwanted heading for India?", 'For bigwigs; it is destination Goa', 'Extr
```

Labeling the categories of news

```
labels=["politics", "finance", "sports",'entertainment','agriculture','technology']
```

```
df.head()
```

	publish_date	headline_category	headline_text	
0	20010102	unknown	Status quo will not be disturbed at Ayodhya; s...	
1	20010102	unknown	Fissures in Hurriyat over Pak visit	
2	20010102	unknown	America's unwanted heading for India?	
3	20010102	unknown	For bigwigs; it is destination Goa	
4	20010102	unknown	Extra buses to clear tourist traffic	

Applying the classifier inorder to categorize the news

```
output=classifier(sequence,labels,multi_label=True)
```

```
op=pd.DataFrame(output)
op.head(10)
```

	sequence	labels	scores	
0	Status quo will not be disturbed at Ayodhya; s...	[politics, entertainment, technology, agricult...	[0.2394094318151474, 0.0022894178982824087, 0....	
1	Fissures in Hurriyat over Pak visit	[politics, finance, technology, entertainment,...	[0.658022940158844, 0.010735778138041496, 0.01...	
2	America's unwanted heading for India?	[politics, technology, finance, entertainment,...	[0.1947079449892044, 0.06738676130771637, 0.05...	
3	For bigwigs; it is destination Goa	[entertainment, politics, finance, technology,...	[0.17034301161766052, 0.007796369958668947, 0....	
4	Extra buses to clear tourist traffic	[technology, entertainment, sports, finance, p...	[0.18427599966526031, 0.05440373718738556, 0.0...	
5	Dilute the power of transfers; says Riberio	[politics, finance, technology, agriculture, s...	[0.5691632032394409, 0.37386956810951233, 0.36...	
6	Focus shifts to teaching of Hindi	[agriculture, technology, finance, sports, ent...	[0.0004916225443594158, 0.000152204476762563, ...	
7	IT will become compulsory in schools	[technology, sports, finance, agriculture, pol...	[0.9620334506034851, 0.18969324231147766, 0.17...	
8	Move to stop freedom fighters' pension flayed	[politics, finance, entertainment, technology,...	[0.7192152738571167, 0.0037985430099070072, 0....	
9	Gilani claims he applied for passport 2 years ago	[politics, technology, finance, entertainment,...	[0.6700330376625061, 0.3524659276008606, 0.157...	

```
sentiment_labels=['positive','negative']
```

```
sent = classifier(sequence,sentiment_labels)
```

```
output = []
key1 = ['labels']
key2 = ['scores']

for index, row in df.iterrows():
  d = {}
  seq = row['headline_text']
  result = classifier(seq,labels,multi_label=True)
  temp_label = list(map(result.get,key1))
  temp_score = list(map(result.get,key2))

  d['headline_text'] = row['headline_text']
  d['label'] = temp_label[0][0]
  d['score'] = temp_score[0][0]
  output.append(d)
```

News Classification and analysis

```
news=pd.DataFrame(output)
news
```

	headline_text	label	score
0	Status quo will not be disturbed at Ayodhya; s...	politics	0.239409
1	Fissures in Hurriyat over Pak visit	politics	0.658023
2	America's unwanted heading for India?	politics	0.194708
3	For bigwigs; it is destination Goa	entertainment	0.170343
4	Extra buses to clear tourist traffic	technology	0.184276
5	Dilute the power of transfers; says Riberio	politics	0.569163
6	Focus shifts to teaching of Hindi	agriculture	0.000492
7	IT will become compulsory in schools	technology	0.962033
8	Move to stop freedom fighters' pension flayed	politics	0.719215
9	Gilani claims he applied for passport 2 years ago	politics	0.670033
10	Parivar dismisses PM's warning	politics	0.832468
11	India; Pak exchange lists of N-plants	agriculture	0.789373
12	Will Qureshi's return really help the govt?	politics	0.937844
13	PM's tacit message: Put Ram tample on hold	politics	0.978529
14	Text of the Prime Minister's article	politics	0.660751
15	NCW to focus on violence against women	politics	0.000146
16	BBC's reality TV will focus on AIIMS	technology	0.981674
17	Jaitley firm on legal reforms	finance	0.090543
18	Hoshangabad farmers have enough water	agriculture	0.980288
19	BJP jumps into rail track conversion issue	politics	0.984833
20	America's unwanted heading for India?	politics	0.194708
21	State may take AP to court over Krishna	politics	0.809038
22	This official has sued the briber	politics	0.316450
23	Park turns temple compound as residents watch	entertainment	0.930808
24	Moves afoot to evict squatters in Urban dist	politics	0.628529
25	Mafia calls the shots in Gandhinagar too	politics	0.374176
26	Status quo will not be disturbed at Ayodhya; s...	politics	0.239409
27	Fissures in Hurriyat over Pak visit	politics	0.658023
28	America's unwanted heading for India?	politics	0.194708
29	For bigwigs; it is destination Goa	entertainment	0.170343
30	Extra buses to clear tourist traffic	technology	0.184276
31	Dilute the power of transfers; says Riberio	politics	0.569163
32	Focus shifts to teaching of Hindi	agriculture	0.000492
33	IT will become compulsory in schools	technology	0.962033
34	Move to stop freedom fighters' pension flayed	politics	0.719215
35	Gilani claims he applied for passport 2 years ago	politics	0.670033
36	Parivar dismisses PM's warning	politics	0.832468
37	India; Pak exchange lists of N-plants	agriculture	0.789373
38	Will Qureshi's return really help the govt?	politics	0.937844
39	PM's tacit message: Put Ram tample on hold	politics	0.978529
40	Text of the Prime Minister's article	politics	0.660751
41	NCW to focus on violence against women	politics	0.000146
42	BBC's reality TV will focus on AIIMS	technology	0.981674
43	Jaitley firm on legal reforms	finance	0.090543
44	Hoshangabad farmers have enough water	agriculture	0.980288
45	BJP jumps into rail track conversion issue	politics	0.984833
46	America's unwanted heading for India?	politics	0.194708
47	State may take AP to court over Krishna	politics	0.809038
48	This official has sued the briber	politics	0.316450

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