

```

import numpy as np
import pandas as pd
from tensorflow.keras.preprocessing.sequence import pad_sequences
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Embedding, Flatten
from sklearn.model_selection import train_test_split

data = pd.read_csv('imdb_top_1000.csv')

# Parameters
max_features = 10000 # Number of words to consider as features
maxlen = 200 # Cut texts after this number of words (among top
max_features most common words)
batch_size = 32

data.head()

```

	Poster_Link \
0	https://m.media-amazon.com/images/M/MV5BMDfKfYT...
1	https://m.media-amazon.com/images/M/MV5BM2MyNj...
2	https://m.media-amazon.com/images/M/MV5BMTMxNT...
3	https://m.media-amazon.com/images/M/MV5BMWwMG...
4	https://m.media-amazon.com/images/M/MV5BMWU4N2...

	Series_Title	Released_Year	Certificate	Runtime \
0	The Shawshank Redemption	1994	A	142 min
1	The Godfather	1972	A	175 min
2	The Dark Knight	2008	UA	152 min
3	The Godfather: Part II	1974	A	202 min
4	12 Angry Men	1957	U	96 min

	Genre	IMDB_Rating \
0	Drama	9.3
1	Crime, Drama	9.2
2	Action, Crime, Drama	9.0
3	Crime, Drama	9.0
4	Crime, Drama	9.0

	Overview	Meta_score \
0	Two imprisoned men bond over a number of years...	80.0
1	An organized crime dynasty's aging patriarch t...	100.0
2	When the menace known as the Joker wreaks havo...	84.0
3	The early life and career of Vito Corleone in ...	90.0
4	A jury holdout attempts to prevent a miscarria...	96.0

	Director	Star1	Star2	Star3
0	Frank Darabont	Tim Robbins	Morgan Freeman	Bob Gunton
1	Francis Ford Coppola	Marlon Brando	Al Pacino	James Caan

2	Christopher Nolan	Christian Bale	Heath Ledger	Aaron Eckhart
3	Francis Ford Coppola	Al Pacino	Robert De Niro	Robert Duvall
4	Sidney Lumet	Henry Fonda	Lee J. Cobb	Martin Balsam

	Star4	No_of_Votes	Gross
0	William Sadler	2343110	28,341,469
1	Diane Keaton	1620367	134,966,411
2	Michael Caine	2303232	534,858,444
3	Diane Keaton	1129952	57,300,000
4	John Fiedler	689845	4,360,000

```
train_data = pad_sequences(train_data, maxlen=maxlen)
test_data = pad_sequences(test_data, maxlen=maxlen)
```

```
model = Sequential()
model.add(Embedding(max_features, 128, input_length=maxlen))
model.add(Flatten())
model.add(Dense(1, activation='sigmoid'))
```

```
f:\DL\myenv\Lib\site-packages\keras\src\layers\core\embedding.py:90:
UserWarning: Argument `input_length` is deprecated. Just remove it.
warnings.warn(
```

```
model.compile(optimizer='adam', loss='binary_crossentropy',
metrics=['accuracy'])
```

```
model.fit(train_data, train_labels, epochs=1, batch_size=batch_size,
validation_split=0.2)
```

```
625/625 ————— 20s 25ms/step - accuracy: 0.6799 - loss:
0.5643 - val_accuracy: 0.8662 - val_loss: 0.3078
```

```
<keras.src.callbacks.history.History at 0x190b9223500>
```

```
test_loss, test_accuracy = model.evaluate(test_data, test_labels)
print("Test Accuracy:", test_accuracy)
```

```
782/782 ————— 2s 3ms/step - accuracy: 0.8608 - loss:
0.3158
```

```
Test Accuracy: 0.8617600202560425
```