

```
!pip install bert-extractive-summarizer transformers torch  
!pip install transformers datasets torch
```

```
➡ t already satisfied: safetensors<0.4.1,>=0.4.0 in /usr/local/lib/python3.10/dist-packages  
t already satisfied: tokenizers<0.20,>=0.19 in /usr/local/lib/python3.10/dist-packages  
t already satisfied: tqdm>=4.27 in /usr/local/lib/python3.10/dist-packages (from transformers==4.41.2)  
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t already satisfied: sympy==1.13.1 in /usr/local/lib/python3.10/dist-packages (from transformers==4.41.2)  
t already satisfied: mpmath<1.4,>=1.1.0 in /usr/local/lib/python3.10/dist-packages (from sympy==1.13.1)  
t already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.10/dist-packages (from Jinja2)  
t already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from Jinja2)  
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t already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from Jinja2)  
t already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from Jinja2)  
t already satisfied: scipy>=1.6.0 in /usr/local/lib/python3.10/dist-packages (from fsspec)  
t already satisfied: joblib>=1.2.0 in /usr/local/lib/python3.10/dist-packages (from fsspec)  
t already satisfied: threadpoolctl>=3.1.0 in /usr/local/lib/python3.10/dist-packages (from joblib>=1.2.0)  
t already satisfied: spacy-legacy<3.1.0,>=3.0.11 in /usr/local/lib/python3.10/dist-packages (from spacy-legacy-loggers==3.0.11)  
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t already satisfied: pydantic!=1.8,!=1.8.1,<3.0.0,>=1.7.4 in /usr/local/lib/python3.10/dist-packages (from spacy-legacy-loggers==3.0.11)  
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t already satisfied: language-data>=1.2 in /usr/local/lib/python3.10/dist-packages (from spacy-legacy-loggers==3.0.11)  
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t already satisfied: pydantic-core==2.23.4 in /usr/local/lib/python3.10/dist-packages (from pydantic!=1.8,!=1.8.1,<3.0.0,>=1.7.4)  
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t already satisfied: pygments<3.0.0,>=2.13.0 in /usr/local/lib/python3.10/dist-packages (from markdown-it-py>=2.2.0)  
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t already satisfied: datasets in /usr/local/lib/python3.10/dist-packages (3.1.0)  
t already satisfied: torch in /usr/local/lib/python3.10/dist-packages (2.5.0+cu121)  
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t already satisfied: huggingface-hub<1.0,>=0.23.2 in /usr/local/lib/python3.10/dist-packages (from datasets)  
t already satisfied: numpy>=1.17 in /usr/local/lib/python3.10/dist-packages (from torch)  
t already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from torch)  
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t already satisfied: pyarrow>=15.0.0 in /usr/local/lib/python3.10/dist-packages (
```

```
from transformers import pipeline
from datasets import load_dataset
```

```
# Load the dataset with Hugging Face's `datasets` library
dataset = load_dataset("cnndailymail", "3.0.0")
```

```
➡ /usr/local/lib/python3.10/dist-packages/huggingface_hub/utils/_token.py:89: User
The secret `HF_TOKEN` does not exist in your Colab secrets.
To authenticate with the Hugging Face Hub, create a token in your settings tab (
You will be able to reuse this secret in all of your notebooks.
Please note that authentication is recommended but still optional to access publ
warnings.warn(
```

```
train-00000-of-                                257M/257M [00:01<00:00, 237MB/s]
00003.parquet: 100%

train-00001-of-                                257M/257M [00:01<00:00, 242MB/s]
00003.parquet: 100%

train-00002-of-                                259M/259M [00:01<00:00, 131MB/s]
00003.parquet: 100%

validation-00000-of-                           34.7M/34.7M [00:00<00:00, 153MB/s]
00001.parquet: 100%

test-00000-of-                                 30.0M/30.0M [00:00<00:00, 135MB/s]
00001.parquet: 100%
```

```
sample_article = dataset['train'][0]['article']
print("Original Article:")
print(sample_article)
```

```
➡ Original Article:
LONDON, England (Reuters) -- Harry Potter star Daniel Radcliffe gains access to
```

```
### Method: Abstractive Summarization using BART model from Hugging Face Transformers
print("\n=== Abstractive Summarization with BART ===")
```

```
➡
=== Abstractive Summarization with BART ===
```

```
# Initialize the Hugging Face summarization pipeline
summarizer = pipeline("summarization", model="facebook/bart-large-cnn")
```

```
➡
```

config.json: 100%	1.58k/1.58k [00:00<00:00, 97.5kB/s]
model.safetensors: 100%	1.63G/1.63G [00:08<00:00, 234MB/s]
generation_config.json: 100%	363/363 [00:00<00:00, 28.5kB/s]
vocab.json: 100%	899k/899k [00:00<00:00, 5.28MB/s]
merges.txt: 100%	456k/456k [00:00<00:00, 1.84MB/s]
tokenizer.json: 100%	1.36M/1.36M [00:00<00:00, 5.50MB/s]

```
/usr/local/lib/python3.10/dist-packages/transformers/tokenization_utils_base.py:
warnings.warn(
```

```
# Generate summary of the sample article
summary = summarizer(sample_article, max_length=130, min_length=30, do_sample=False)
print("Generated Summary:")
print(summary[0]['summary_text'])
```



Generated Summary:

Harry Potter star Daniel Radcliffe turns 18 on Monday. He gains access to a repo