```
!pip install transformers
# transformer install
```

```
Collecting transformers
  Downloading transformers-4.34.1-py3-none-any.whl (7.7 MB)
  ──────────────────────────────────────── 7.7/7.7 MB 50.6 MB/s eta 0:00:00
Requirement already satisfied: filelock in /usr/local/lib/python3.10/dist-packages (from transformers) (3.12.4)
Collecting huggingface-hub<1.0,>=0.16.4 (from transformers)
  Downloading huggingface_hub-0.18.0-py3-none-any.whl (301 kB)
  ──────────────────────────────────────── 302.0/302.0 kB 28.9 MB/s eta 0:00:00
Requirement already satisfied: numpy>=1.17 in /usr/local/lib/python3.10/dist-packages (from transformers) (1.23.5)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from transformers) (23.2)
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.10/dist-packages (from transformers) (6.0.1)
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.10/dist-packages (from transformers) (2023.6.3)
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages (from transformers) (2.31.0)
Collecting tokenizers<0.15,>=0.14 (from transformers)
  Downloading tokenizers-0.14.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (3.8 MB)
  ──────────────────────────────────────── 3.8/3.8 MB 70.7 MB/s eta 0:00:00
Collecting safetensors>=0.3.1 (from transformers)
  Downloading safetensors-0.4.0-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (1.3 MB)
  ──────────────────────────────────────── 1.3/1.3 MB 66.6 MB/s eta 0:00:00
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.10/dist-packages (from transformers) (4.66.1)
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.10/dist-packages (from huggingface-hub<1.0,>=0.16.4->transformers) (2023.6.0)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.10/dist-packages (from huggingface-hub<1.0,>=0.16.4->transformers) (4.5.0)
Collecting huggingface-hub<1.0,>=0.16.4 (from transformers)
  Downloading huggingface_hub-0.17.3-py3-none-any.whl (295 kB)
  ──────────────────────────────────────── 295.0/295.0 kB 29.4 MB/s eta 0:00:00
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (3.3.1)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (2.0.7)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (2023.7.22)
Installing collected packages: safetensors, huggingface-hub, tokenizers, transformers
Successfully installed huggingface-hub-0.17.3 safetensors-0.4.0 tokenizers-0.14.1 transformers-4.34.1
```

```
import transformers
## transfromer version 확인
print(transformers.__version__)
```

```
4.34.1
```

```
from transformers import pipeline

senti = pipeline('sentiment-analysis')
# 감성분석파이프라인을 senti 에 저장
```

```
No model was supplied, defaulted to distilbert-base-uncased-finetuned-sst-2-english and revision af0f99b (https://huggingface.co/distilbert-base-uncased-finetuned-sst-2-english).
Using a pipeline without specifying a model name and revision in production is not recommended.
Downloading (…)lve/main/config.json: 100%          629/629 [00:00<00:00, 15.5kB/s]
Downloading model.safetensors: 100%          268M/268M [00:02<00:00, 145MB/s]
Downloading (…)okenizer_config.json: 100%          48.0/48.0 [00:00<00:00, 1.62kB/s]
Downloading (…)solve/main/vocab.txt: 100%          232k/232k [00:00<00:00, 1.77MB/s]
```

```
# senti model 출력
senti.model
```

```
DistilBertForSequenceClassification(
  (distilbert): DistilBertModel(
    (embeddings): Embeddings(
      (word_embeddings): Embedding(30522, 768, padding_idx=0)
      (position_embeddings): Embedding(512, 768)
      (LayerNorm): LayerNorm((768,), eps=1e-12, elementwise_affine=True)
      (dropout): Dropout(p=0.1, inplace=False)
    )
    (transformer): Transformer(
      (layer): ModuleList(
        (0-5): 6 x TransformerBlock(
          (attention): MultiHeadSelfAttention(
            (dropout): Dropout(p=0.1, inplace=False)
            (q_lin): Linear(in_features=768, out_features=768, bias=True)
            (k_lin): Linear(in_features=768, out_features=768, bias=True)
            (v_lin): Linear(in_features=768, out_features=768, bias=True)
            (out_lin): Linear(in_features=768, out_features=768, bias=True)
          )
          (sa_layer_norm): LayerNorm((768,), eps=1e-12, elementwise_affine=True)
          (ffn): FFN(
            (dropout): Dropout(p=0.1, inplace=False)
            (lin1): Linear(in_features=768, out_features=3072, bias=True)
            (lin2): Linear(in_features=3072, out_features=768, bias=True)
            (activation): GELUActivation()
          )
          (output_layer_norm): LayerNorm((768,), eps=1e-12, elementwise_affine=True)
        )
      )
    )
  )
  (pre_classifier): Linear(in_features=768, out_features=768, bias=True)
  (classifier): Linear(in_features=768, out_features=2, bias=True)
  (dropout): Dropout(p=0.2, inplace=False)
)
```

```
print(senti(["It wouldn't be inaccurate to assume that I couldn't exactly not say that it is or isn't almost partiall"]))
```

```
[{'label': 'POSITIVE', 'score': 0.7667208313941956}]
```

```
print(senti(["On the contrary. I'm possibly more or less not definitely rejecting the idea that in no way with any amount of uncertainty that I undeniably do or do not know where he shouldn't probab
```

```
[{'label': 'NEGATIVE', 'score': 0.9919554591178894}]
```

```
# 영화 조커에서 나온 조커의 대사
# 욕설을 필터링한 결과 -> positive
print(senti(["I thought my life was a tragedy, but is was a f**king comedy."]))
# 욕설을 필터링 안한 결과 -> negative
print(senti(["I thought my life was a tragedy, but is was a fucking comedy."]))
```

```
[{'label': 'POSITIVE', 'score': 0.9286355376243591}]
[{'label': 'NEGATIVE', 'score': 0.9920033812522888}]
```