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!pip install transformers
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Requirement already satisfied: transformers in /usr/local/lib/python3.10/dist-packages (4.40.0)
Requirement already satisfied: filelock in /usr/local/lib/python3.10/dist-packages (from transformers) (3.13.4)
Requirement already satisfied: huggingface-hub<1.0,>=0.19.3 in /usr/local/lib/python3.10/dist-packages (from transformers) (0.20.3)
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Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from transformers) (24.0)
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Requirement already satisfied: tokenizers<0.20,>=0.19 in /usr/local/lib/python3.10/dist-packages (from transformers) (0.19.1)
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Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.10/dist-packages (from transformers) (4.66.2)
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.10/dist-packages (from huggingface-hub<1.0,>=0.19.3->trans)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.10/dist-packages (from huggingface-hub<1.0,>=0.19.3->trans)
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (3.3.2)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests->transformers) (3.7)
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) (2024.2.2)
```

```
import torch
import torch.nn.functional as F
from transformers import DistilBertTokenizer, DistilBertForSequenceClassification

# Load pre-trained DistilBERT model and tokenizer
tokenizer = DistilBertTokenizer.from_pretrained('distilbert-base-uncased')
model = DistilBertForSequenceClassification.from_pretrained('distilbert-base-uncased')

# Function to predict sentiment
def predict_sentiment(text):
    # Tokenize input text
    inputs = tokenizer(text, return_tensors='pt', truncation=True, padding=True)

    # Perform inference
    outputs = model(**inputs)

    # Get predicted probabilities
    probabilities = F.softmax(outputs.logits, dim=1)

    # Get predicted class index
    predicted_class = torch.argmax(probabilities, dim=1).item()

    # Map predicted class index to sentiment label
    sentiment_labels = ['negative', 'positive']
    predicted_sentiment = sentiment_labels[predicted_class]

    return predicted_sentiment, probabilities[0][predicted_class].item()

# Take input text from user
text = input("Enter the text for sentiment analysis: ")

# Predict sentiment
predicted_sentiment, confidence = predict_sentiment(text)

print("Predicted sentiment:", predicted_sentiment)
print("Confidence:", confidence)
```

Some weights of DistilBertForSequenceClassification were not initialized from the model checkpoint at distilbert-base-uncased and are randomly initialized. You should probably TRAIN this model on a down-stream task to be able to use it for predictions and inference.

Enter the text for sentiment analysis: i love u

Asking to truncate to max\_length but no maximum length is provided and the model has no predefined maximum length. Default to no truncation.

Predicted sentiment: positive

Confidence: 0.5026140809059143

