



Hugging Face 인공지능 플랫폼

제주대학교 컴퓨터공학과
변영철 교수

github.com/yungbyun/ai



<https://raw.githubusercontent.com/yungbyun/ai2/refs/heads/main/a.jpg.jfif>



“

 **파이프라인 코드로 허깅페이스 모델을 이용하여
그림을 설명해주는 AI 코드를 작성해봐.**



pip install transformers
pip install tensorflow
pip install tf_keras

```
from transformers import pipeline
from PIL import Image
import requests
from io import BytesIO

# image-to-text 파이프라인 설정
pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-base")

# 이미지 URL 설정
Image_url = "https://raw.githubusercontent.com/yungbyun/ai2/refs/heads/main/a.jpg.jfif" # 설명하고자 하는 이미지의 URL로 변경하세요

# URL에서 이미지 불러오기
response = requests.get(image_url)
image = Image.open(BytesIO(response.content))

# 이미지 설명 생성
caption = pipe(image)

print("이미지 설명:", caption[0]['generated_text'])
```

The screenshot shows the Google Colab homepage in a browser window. The top navigation bar includes links for 'Blog', 'Release Notes', 'Notebooks', 'Resources', and buttons for 'Open Colab', 'New Notebook', and 'Sign Up'. A large banner image of a complex steel structure is visible. Below the banner, the title 'Google Colaboratory' is displayed in a large, bold font. A descriptive paragraph follows, mentioning Colab as a hosted Jupyter Notebook service. At the bottom of the main content area are two prominent blue buttons: 'Open Colab' and 'New Notebook'. In the bottom right corner, there is a dark overlay window titled 'Colab 시작하기' (Colab Start) in Korean. This window contains a sidebar with options like '예' (Recent), '최근 사용' (Recently Used), 'Google Drive', 'GitHub', and '업로드' (Upload). The main pane shows a list of notebooks with columns for '제목' (Title), '마지막 연 시간' (Last modified time), and '처음 연 시간' (First modified time). The list includes:

제목	마지막 연 시간	처음 연 시간
Colab 시작하기	오전 11:02	2020년 4월 30일
Untitled25.ipynb	오전 10:59	오전 10:59
Untitled24.ipynb	10월 18일	10월 18일
Untitled21.ipynb	1월 5일	2024년 11월 3일

At the bottom of the sidebar, there is a blue button labeled '+ 새 노트' (New Note) with a cursor pointing at it. The bottom of the page features a 'BLOG' section with a large letter 'E' icon and a URL 'https://colab.research.google.com'.

Untitled26.ipynb ☆ ☁

파일 수정 보기 삽입 런타임 도구 도움말

명령어 + 코드 + 텍스트 ▶ 모두 실행 ▾ 연결 ▾ ⌂

셀 실행 (Ctrl+Enter) 셀이 이 세션에서 실행되지 않을 때

```
from transformers import pipeline
from PIL import Image
from requests import get
from io import BytesIO

# image-to-text 파이프라인 설정
pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-base")

# 이미지 URL 설정
image_url = "https://raw.githubusercontent.com/yungbyun/ai2/main/a.jpg.jfif" # 설명하고자 하는 이미지

# URL에서 이미지 불러오기
response = get(image_url)
image = Image.open(BytesIO(response.content))

# 이미지
print("이미지가 불러왔습니다.")
```

Python 라이브러리 설치 방법 Google Drive에서 데이터 로드해 줘 간단한 ML 모델을 학습하는 예시 보여

변수 터미널 ⌂

Untitled26.ipynb ☆

파일 수정 보기 삽입 런타임 도구 도움말

명령어 + 코드 + 텍스트 ▶ 모두 실행 ✓ RAM 디스크

Gemini

```
[1] from transformers import pipeline
from PIL import Image
import requests
from io import BytesIO

# image-to-text 파이프라인 설정
-pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-base")
+pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-base")

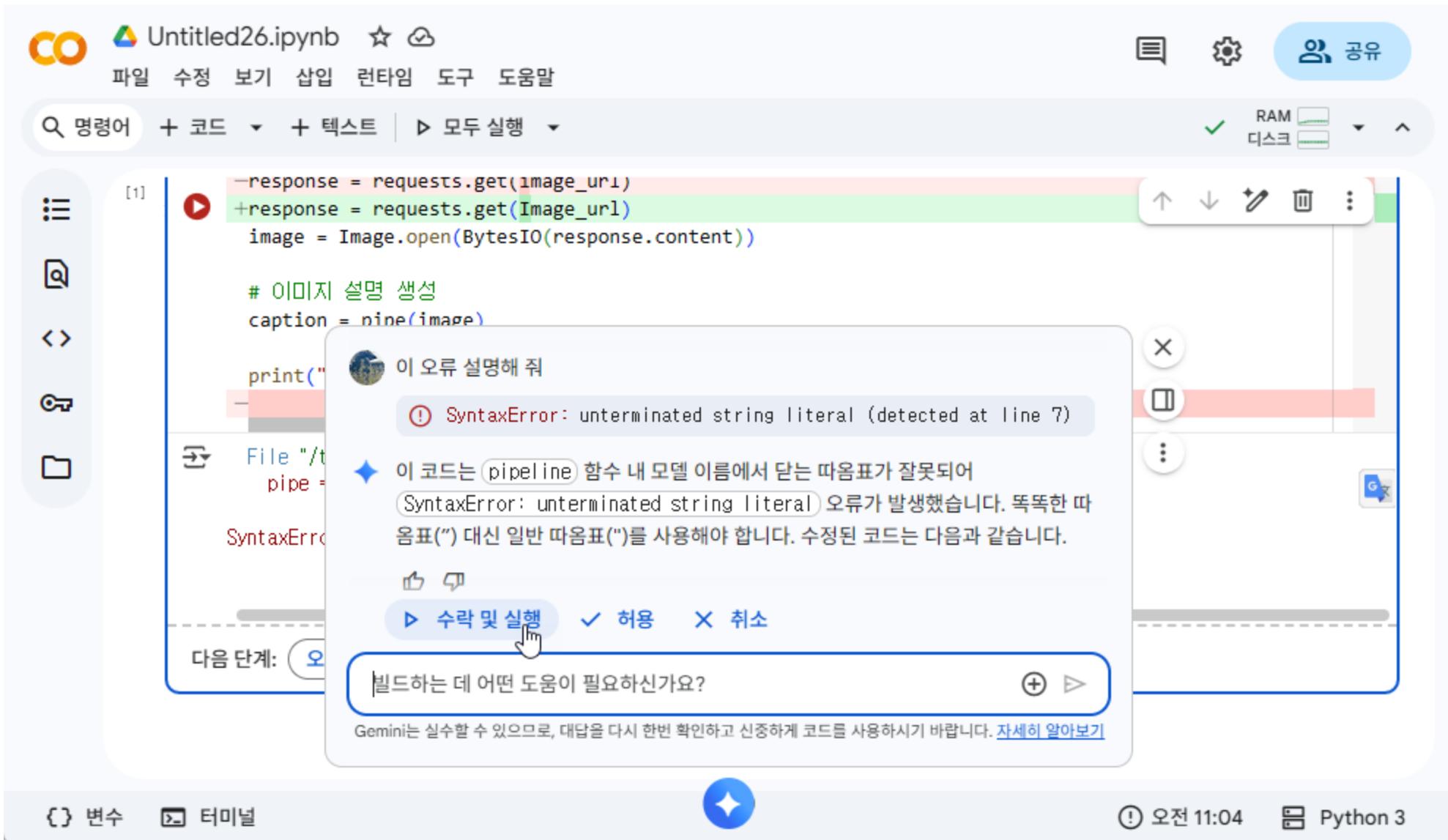
# 이미지 URL 설정
Image_url = "https://raw.githubusercontent.com/yungbyun/ai2/main/a.jpg.jfif" # 설명하고

# URL에서 이미지 불러오기
-response = requests.get(image_url)
+response = requests.get(Image_url)
image = Image.open(BytesIO(response.content))

# 이미지 설명 생성
caption = pipe(image)
```

Gemini 전환

{ } 변수 터미널 ⏪ 오전 11:04 Python 3



Untitled26.ipynb ☆ ☁

파일 수정 보기 삽입 런타임 도구 도움말

명령어 + 코드 + 텍스트 ▶ 모두 실행 ✓ RAM 디스크

warnings.warn(
pytorch_model.bin: 100% 990M/990M [00:10<00:00, 200MB/s]
model.safetensors: 100% 990M/990M [00:09<00:00, 301MB/s]
tokenizer_config.json: 100% 506/506 [00:00<00:00, 9.04kB/s]
vocab.txt: 232k/? [00:00<00:00, 2.24MB/s]
tokenizer.json: 711k/? [00:00<00:00, 8.92MB/s]
special_tokens_map.json: 100% 125/125 [00:00<00:00, 2.78kB/s]
preprocessor_config.json: 100% 287/287 [00:00<00:00, 2.93kB/s]

Using a slow image processor as `use_fast` is unset and a slow processor was saved with this model. `use_fast=True`
Device set to use cpu

이미지 설명: a beach with rocks and water at sunset

{ } 변수 ☐ 터미널 ⚡ ✓ 오전 11:07 Python 3

“

 모델을 직접 이용하여 그림을 설명하는
코드를 작성해봐.



Google
colab kaggle

```
from transformers import BlipProcessor, BlipForConditionalGeneration
from PIL import Image
import requests

# 모델과 프로세서를 로드합니다
processor = BlipProcessor.from_pretrained("Salesforce/blip-image-captioning-base")
model = BlipForConditionalGeneration.from_pretrained("Salesforce/blip-image-captioning-base")

# 예시 이미지 URL에서 이미지를 가져옵니다
url = "https://raw.githubusercontent.com/yungbyun/ai2/refs/heads/main/a.jpg.jfif" # 여기에 이미지 URL을 넣으세요
image = Image.open(requests.get(url, stream=True).raw)

# 입력을 모델 입력에 맞게 처리합니다
inputs = processor(image, return_tensors="pt")

# 모델을 통해 이미지 설명을 생성합니다
out = model.generate(**inputs)
description = processor.decode(out[0], skip_special_tokens=True)

# 결과를 출력합니다
print("이미지 설명:", description)
```

<https://raw.githubusercontent.com/yungbyun/ai2/refs/heads/main/dog-puppy-on-garden-royalty.avif>



아이디어?



모델 직접 이용 vs. 파이프라인

Salesforce/blip-image-captioning-base

허깅페이스(HuggingFace)

- <https://huggingface.co/> • 인공지능(AI)과 자연어 처리(NLP) 모델을 제공하는 플랫폼이자 커뮤니티

The AI community

Models 469,541 Filter by name

meta-llama/Llama-2-70b
Text Generation • Updated 4 days ago • 25.2k • 64

stabilityai/stable-diffusion-xl-base-0.9
Updated 6 days ago • 2.01k • 393

openchat/openchat
Text Generation • Updated 2 days ago • 1.3k • 136

llyasviel/ControlNet-v1-1
Updated Apr 26 • 1.87k

cerspense/zeroscope_v2_XL
Updated 3 days ago • 2.66k • 334

meta-llama/Llama-2-13b
Text Generation • Updated 4 days ago • 3.22k • 64

찾기: Salesforce/blip-image-captioning-base

The screenshot shows the Hugging Face platform interface. At the top, there is a search bar with the query "Salesforce/blip-image-capt". Below the search bar, the main navigation menu includes "Models", "Datasets", "Spaces", "Posts", "Docs", and "Pricing". A red circle highlights the "Models" tab, which is currently selected.

In the center, a card for the "Salesforce/blip-image-captioning-base" model is displayed. The card has a blue header with the model name and a "Follow" button. It includes sections for "Image-to-Text", "arxiv:2201.12086", and "Model card". The "Model card" section contains a summary of the model, mentioning it is a "BLIP: Bootstrapping Unified Vision-Language Understanding and Generation" model pretrained on COCO dataset - base architecture (with ViT base backbone). A "Use Full-text search" link is also present.

To the right of the card, there are several interactive buttons: "Train", "Deploy", and "Use this model" (which is highlighted with a black background). Below these buttons, a chart shows "Downloads last month" at 1,946,120, accompanied by a line graph. Further down, there is an "Inference API" section with a "Cold" dropdown, an "Image-to-Text" input field, and a placeholder text "Drag image file here or click to browse from your device".

At the bottom of the card, there is a URL: <https://huggingface.co/Salesforce/blip-image-captioning-base>.

Hugging Face Models Datasets Spaces Posts Docs Pricing

Salesforce/**blip-image-captioning-base** like 508 Follow Salesforce 732

Image-to-Text Transformers PyTorch TensorFlow blip image-text-to-text image-captioning Inference Endpoints

arxiv:2201.12086 License: bsd-3-clause

Model card Files Community 34 Edit model card

BLIP: Bootstrapping Language-Image Pre-training for Unified Vision-Language Understanding and Generation

Model card for image captioning pretrained on COCO dataset - base architecture (with ViT base backbone).

Libraries Downloads last month 1,946,120 Transformers

Inference API Image-to-Text

Drag image file here or click to browse from your device

View Code Maximize

Diagram illustrating the model's architecture:

```
graph LR; Image[Image Encoder] --> Embed[Embedding]; Embed --> Prompt[Text Encoder]; Prompt --> NotMatched[Not matched]; Prompt --> Grounded[Image-grounded Text Encoder]; Grounded --> Output[Output]
```

The screenshot shows the Hugging Face Model Hub interface. At the top, there's a navigation bar with links for Datasets, Spaces, Posts, Docs, Pricing, Log In, and Sign Up. Below the navigation is a search bar labeled "Search model". A red circle highlights the "Models" button in the top right corner. The main content area displays a list of models, with the first few listed below:

- s. stabilityai/stable-diffusion-3.5-large
- genmo/mochi-1-preview
- microsoft/OmniParser
- nvidia/Llama-3.1-Nemotron-70B-Instruct-HF
- Freepik/flux.1-lite-8B-alpha
- s. stabilityai/stable-diffusion-3.5-large-turbo
- black-forest-labs/FLUX.1-dev
- CohereForAI/aya-expansive-8b

On the left side, there are sections for "Tasks" (Libraries, Datasets, Languages, Licenses), "Multimodal" tasks (Image-Text-to-Text, Visual Question Answering, Document Question Answering, Video-Text-to-Text, Any-to-Any), and "Computer Vision" tasks (Depth Estimation, Image Classification, Object Detection, Image Segmentation, Text-to-Image, Image-to-Text, Image-to-Image, Image-to-Video, Unconditional Image Generation, Video Classification, Text-to-Video, Zero-Shot Image Classification, Mask Generation, Zero-Shot Object Detection, Text-to-3D, Image-to-3D, Image Feature Extraction, Keypoint Detection). A yellow box highlights the "Multimodal" section.

<https://huggingface.co/models>

“
다양한 AI 모델(예: 챗봇, 번역기,
텍스트 요약기, 이미지 생성 모델 등)을
찾고 사용할 수 있는 저장소”

Tasks 1 Libraries 1 Datasets Languages Other

Filter Tasks by name Reset

Multimodal

Image-Text-to-Text Visual Question A

Document Question Answering

Video-Text-to-Text Any-to-Any

Computer Vision

Depth Estimation Image Classification

Object Detection Image Segmentation

Text-to-Image Image-to-Text Image-to-Image Image-to-video

Tasks 1 Libraries 1 Datasets Languages Other

Filter Libraries by name Reset Li

Transformers TensorBoard PyTorch Safetensors

GGUF

Libraries with no match

PEFT Diffusers stable-baselines3

sentence-transformers ml-agents Adapters setfit timm sample-factory

MLX Keras Transformers.js

Models 503 Filter by name Full-text search

Salesforce/blip-image-captioning-large Image-to-Text Updated Dec 2023 2.14M 1.13k

microsoft/trocr-base-handwritten Image-to-Text Updated May 28 1.11M 317

jinyhybr/OCR-Donut-CORD Image-to-Text Updated Nov 5, 2022 2.69k 188

Salesforce/blip-image-captioning-base Image-to-Text Updated Aug 1, 2023 1.84M 501

like

1.13k

Follow

Salesforce

346

Image-to-Text

Transformers

PyTorch

TensorFlow

Safetensors

blip

text2text-generation

image-captioning

Inference Endpoints

arxiv:2201.12086

License: bsd-3-clause

Model card

Files

Community 37

⋮

Train

Deploy

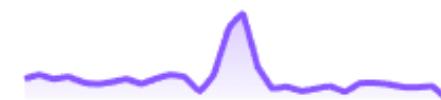
Use this model

BLIP: Bootstrapping Language-Image Pre-training for Unified Vision-Language Understanding and Generation

Model card for image captioning pretrained on COCO dataset - base architecture (with ViT large backbone).

Edit model card

Downloads last month
2,140,287



Safetensors



Please login with your Hugging Face account to run the widgets.

Log In

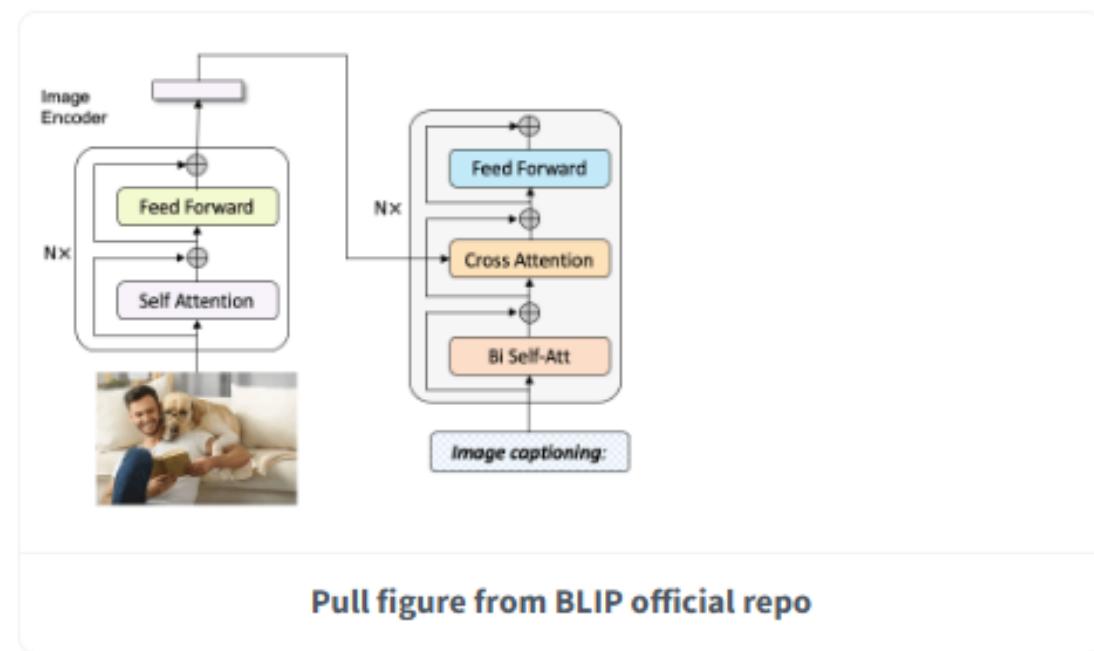
or Create a free account

Warm



Drag image file here or click to browse from your device

Model card for image captioning pretrained on COCO dataset - base architecture (with ViT large backbone).



TL;DR

Safetensors

Model size 470M params

Tensor type I64 · F32



Inference API

Warm

Image-to-Text



araed view of a beach with rocks and a mountain in the background

</> View Code ⏱ 16.7s ✓ 2.4s of compute

Maximize



Salesforce/blip-image-captioning-large

like 1.13k

Follow Salesforce 346

Image-to-Text

Transformers

PyTorch

TensorFlow

Safetensors

blip

text2text-generation

image-captioning

Inference Endpoints

arxiv:2201.12086

License: bsd-3-clause

Model card

Files

Community 37



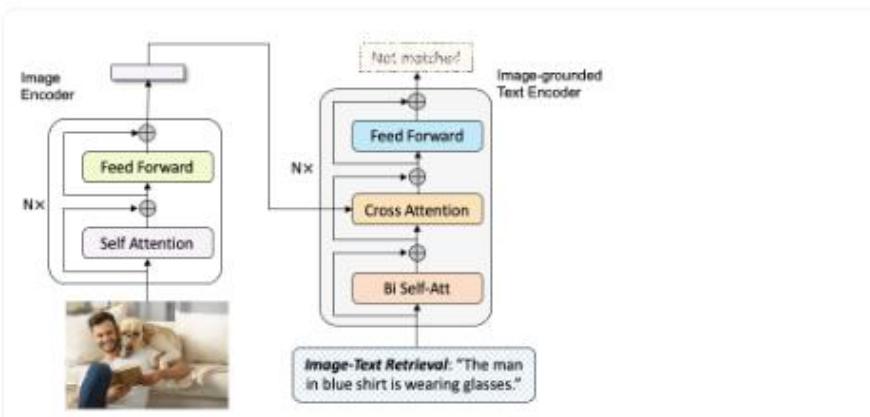
Train

Deploy

Use this model

BLIP: Bootstrapping Language-Image Pre-training for Unified Vision-Language Understanding and Generation

Model card for image captioning pretrained on COCO dataset - base architecture (with ViT large backbone).



Edit model card

Downloads last month
2,140,287

Safetensors

Model size 470M params

Tensor type I64 · F32

Libraries
Transformers

Inference API

Warm

Image-to-Text

Drag image file here or click to browse from your device

</> View Code

Maximize

Model tree for Salesforce/blip-image-captioni...

Finetunes

4 models

Salesforce

Image

Inference

Model

BLIP: B
Unified V
Generatio

Model card
base archit

How to use from the Transformers 1 library

X

```
# Use a pipeline as a high-level helper
from transformers import pipeline
```

```
pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-large")
```

Copy

Copy

```
# Load model directly
```

```
from transformers import AutoProcessor, AutoModelForSeq2SeqLM
```

```
processor = AutoProcessor.from_pretrained("Salesforce/blip-image-captioning-large")
```

```
model = AutoModelForSeq2SeqLM.from_pretrained("Salesforce/blip-image-captioning-large")
```

Quick Links

-  [Read model documentation](#)
-  [Read docs on high-level-pipeline](#)
-  [Read our learning resources](#)

Image
Encoder

NX

Feed Forward

NX

Feed Forward

Cross Attention

Drag image file here or click to browse from your device 23



+ 코드 + 텍스트

연결

Gemini



{x}



```
# Use a pipeline as a high-level helper
from transformers import pipeline

pipe = pipeline("image-to-text", model="Salesforce/blip-image-captioning-large")
```





Search models, datasets, u...

Models

Datasets

Spaces

Posts

Docs

Pricing



Main

Tasks Libraries Languages Licenses

Other

Modalities



3D



Audio



Geospatial



Image



Tabular



Text



Time-series



Video

Size (rows)

< 1K

> 1T

Format



json



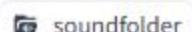
csv



parquet



imagefolder



soundfolder



webdataset



text



arrow

Datasets 243,119

Filter by name

Full-text search

Sort: Trending

fka/awesome-chatgpt-prompts

Viewer · Updated Sep 4 · 170 · 9.52k · 6.22k

qq8933/OpenLongCoT-Pretrain

Viewer · Updated 16 days ago · 103k · 373 · 66

Spawning/PD12M

Viewer · Updated 13 days ago · 12.4M · 8.98k · 109

wyu1/Leopard-Instruct

Viewer · Updated 5 days ago · 1.03M · 33.8k · 47

OpenCoder-LLM/opc-sft-stage1

Viewer · Updated 1 day ago · 4.22M · 559 · 27

The screenshot shows the Hugging Face website's 'Spaces' section. At the top, there is a navigation bar with links for Models, Datasets, Spaces (which is highlighted with an orange circle), Posts, Docs, Pricing, and a user profile icon. Below the navigation bar, the title 'Spaces' is displayed with a colorful icon, followed by the subtitle 'Discover amazing AI apps made by the community!'. There are buttons for 'Create new Space' and 'Learn more about Spaces'. The main content area features a search bar, a 'Spaces of the week' section, and a list of three AI applications:

- OmniParser** (Running on ZERO) - 149 likes, posted 13 days ago by **jadechoghari**.
- ACE-Chat** (Running on ZERO) - 163 likes, posted 2 days ago by **scepter-studio**. Description: (Tongyi Lab) ACE: All-round Creator and Editor.
- Framer** (Running on ZERO) - 252 likes, posted 2 days ago by **wwen1997**. Description: Framer: Interactive Frame Interpolation.

Below the featured apps, there are buttons for 'Browse ZeroGPU Spaces', 'Full-text search', and 'Sort: Trending'.

<https://huggingface.co/spaces/sizifart/change-clothes>

Spaces | sizifart / **change-clothes** like 1 • Running

SIZ CHANGE CLOTHES

[Discussion](#) [SIZIF](#) [GitHub](#) [Page](#)

Step 1. Upload a person image

Step 2. Upload a garment image

Step 3. Press “Run” to get try-on results

Person image



Garment image



The screenshot shows the Hugging Face website interface. At the top, there is a navigation bar with links for Models, Datasets, Spaces, Posts, Docs (highlighted with a red circle), Pricing, and a user profile icon. Below the navigation bar, the main content area has a sidebar on the left containing links for New, Profile, Inbox (0), Settings, Billing, Get Pro, Organizations, Create New, Resources, Hub guide, Transformers doc, Forum, Tasks, and Learn. The main content area displays a 'Following' section with tabs for All, Models, Datasets, Spaces, Papers, Collections, Community, Posts, Upvotes, and Likes. A modal window titled 'Follow your favorite AI creators' lists three profiles: josefprusa, hiyouga, and tomaarsen, each with a 'Follow' button. To the right of the main content area is a sidebar titled 'Website' which lists various sections: Tasks, HuggingChat, Collections, Daily Papers, Posts, Metrics, Languages, Organizations, Solutions, Enterprise Hub, Expert Support, Inference Endpoints, Hardware, Community, Blog Articles, Learn (highlighted with a red circle), Discord, and Forum.

Hugging Face

Search models, datasets, u...

Models Datasets Spaces Posts Docs Pricing

New

Yung-Cheol

- Profile
- Inbox (0)
- Settings
- Billing
- Get Pro

Organizations

Create New

Resources

- Hub guide
- Transformers doc
- Forum
- Tasks
- Learn

<https://huggingface.co/learn>

Following 0

All Models Datasets Spaces Papers Collections

Community Posts Upvotes Likes

NEW Follow your favorite AI creators

- josefprusa · Pioneer of 3D printing, improvin...
- hiyouga · LLaMA Factory Creator
- tomaarsen · Maintainer of Sentence Transfor...

Follow Follow Follow

Website

- Tasks
- HuggingChat
- Collections
- Daily Papers
- Posts
- Metrics
- Languages
- Organizations
- Solutions
- Enterprise Hub
- Expert Support
- Inference Endpoints
- Hardware
- Community
- Blog Articles
- Learn
- Discord
- Forum

Hugging face NLP Course 구를 검색

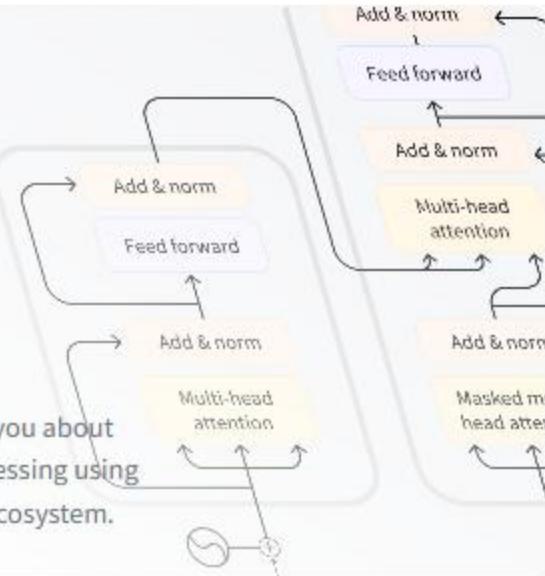
 **Hugging Face** Models Datasets Spaces Posts Docs Pricing

Learn

LLM을 이용한 자연어처리

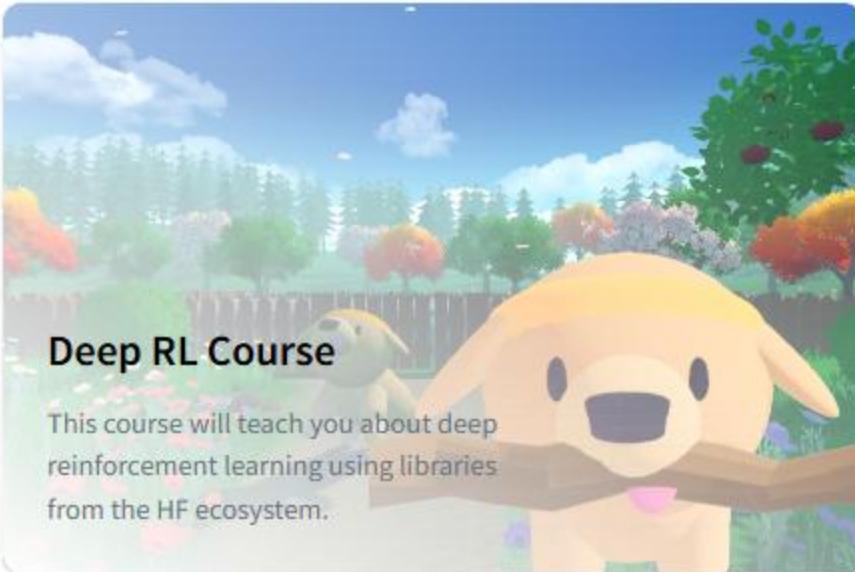
NLP Course

This course will teach you about natural language processing using libraries from the HF ecosystem.



Deep RL Course

This course will teach you about deep reinforcement learning using libraries from the HF ecosystem.



<https://huggingface.co/learn/nlp-course>

like





Hugging Face

Search models, datasets, users...

Models

Datasets

Spaces

Posts

Docs

Pricing



• NLP Course ▾



Search documentation

Ctrl+K

EN ▾



AR

BN

DE

EN

ES

Action

FA

Language Processing

FR

Transformers, what can they

GJ

Transformers work?

HE

Transformer models

HI

Transformer models

ID

Sequence-to-sequence

IT

Sequence-to-sequence

JA

Sequence-to-sequence

KO

Sequence-to-sequence

PT

Sequence-to-sequence

RU

Sequence-to-sequence

TH

Sequence-to-sequence

2,247

Introduction

Ask a question

Welcome to the 😊 Course!



Introduction

Welcome to the 😊 Course!

What to expect?

Who are we?

FAQ

Let's Go

트랜스포머(Transformer)

자연어 처리(NLP)와 컴퓨터 비전(CV) 분야의 인공
지능(AI) 모델을 쉽게 사용하고 실험할 수 있도록 도
와주는 툴

The screenshot shows the Hugging Face NLP Course interface. On the left sidebar, there's a navigation menu with items like '0. 초기 설정', '1. 트랜스포머 모델', '단원 소개', '자연어 처리', '트랜스포머로 무엇을 할 수 있나요?' (highlighted with a red oval), '트랜스포머는 어떻게 동작하나요?', '인코더 모델', '디코더 모델', '시퀀스-투-시퀀스 모델', '편향과 한계', '단원 정리', and '다음 단원과 함께'. Below the sidebar is a URL: <https://huggingface.co/learn/nlp-course/ko/chapter1/3?fw=pt>. The main content area has a title '트랜스포머로 무엇을 할 수 있나요?' with a 'Ask a question' button, an 'Open in Colab' button (also highlighted with a red oval), and other options like 'Open' and 'Studio Lab'. A text block explains that the chapter will demonstrate how to use the Transformer model with the pipeline() function. A callout box below provides instructions on how to use the 'Open in Colab' button. To the right, there's a vertical sidebar with a list of topics: '트랜스포머로 무엇을 할 수 있나요?', '트랜스포머는 어디에나 있어요!', '파이프라인으로 작업하기', '제로샷 분류(Zero-shot classification)', '텍스트 생성(Text generation)', '파이프라인에 Hub의 모델 적용하기', '추론(Inference) API', '마스크 채우기(Mask filling)', '개체명 인식(Named entity recognition)', '질의 응답(Question-answering)', '요약(Summarization)', and '번역(Translation)'.

트랜스포머로 무엇을 할 수 있나요?

Ask a question CO Open in Colab Open Studio Lab

이번 장에서는 트랜스포머(Transformer) 모델을 사용해 무엇을 할 수 있는지 같이 살펴보고, 😊 Transformers 라이브러리 툴의 첫 사용을 `pipeline()` 함수와 함께 시작하겠습니다.

오른쪽 상단에 `Open in Colab` 버튼이 보이시나요? 버튼을 클릭하면 이번 장에서 사용한 모든 코드 샘플들을 Google Colab notebook을 통해 열 수 있습니다. 이런 버튼을 예제 코드를 포함하는 모든 단원에서 발견하실 수 있습니다. 로컬 환경에서 예제 코드를 실행하려면 `setup`을 살펴보세요.

트랜스포머로 무엇을 할 수 있나요?
트랜스포머는 어디에나 있어요!
파이프라인으로 작업하기
제로샷 분류(Zero-shot classification)
텍스트 생성(Text generation)
파이프라인에 Hub의 모델 적용하기
추론(Inference) API
마스크 채우기(Mask filling)
개체명 인식(Named entity recognition)
질의 응답(Question-answering)
요약(Summarization)
번역(Translation)

sentiment-analysis : 감정 분석

text-generation : 텍스트 생성

fill-mask : 마스크 채우기

NER : 개체명 인식 (named entity recognition)

feature-extraction : 특징 추출 (텍스트에 대한 벡터 표현 추출)

question-answering : 질의 응답

summarization : 요약

translation : 번역

zero-shot-classification : 제로샷 분류

문장의 감정인식

“

**I've been waiting for a HuggingFace course
my whole life.**

```
from transformers import pipeline  
  
classifier = pipeline("sentiment-analysis")  
classifier("I've been waiting for a HuggingFace course my whole life.")
```

```
classifier(  
    ["I've been waiting for a HuggingFace course my whole life.", "I hate this so much!"]  
)
```

이어서 문장 생성

“

In this course, we will teach you how to ...

```
from transformers import pipeline  
  
generator = pipeline("text-generation", model="distilgpt2")  
generator(  
    "In this course, we will teach you how to",  
    max_length=30,  
    num_return_sequences=2,  
)
```

빈 곳<mask> 채우기

“

This course will teach you all about <mask> models.

```
from transformers import pipeline  
  
unmasker = pipeline("fill-mask")  
  
unmasker("This course will teach you all about <mask> models.", top_k=2)
```

엔티티 인식

“

My name is Sylvain and I work at Hugging Face in Brooklyn.

```
from transformers import pipeline  
  
ner = pipeline("ner", grouped_entities=True)  
ner("My name is Sylvain and I work at Hugging Face in Brooklyn.")
```

질문에 대답하기

“

My name is Sylvain and I work at Hugging Face in Brooklyn. Where do I work?

```
from transformers import pipeline

question_answerer = pipeline("question-answering")
question_answerer(
    question="Where do I work?",
    context="My name is Sylvain and I work at Hugging Face in Brooklyn",
)
```

요약하기

```
from transformers import pipeline
```

```
summarizer = pipeline("summarization")  
summarizer(  
    """
```

America has changed dramatically during recent years. Not only has the number of graduates in traditional engineering disciplines such as mechanical, civil, electrical, chemical, and aeronautical engineering declined, but in most of the premier American universities engineering curricula now concentrate on and encourage largely the study of engineering science. As a result, there are declining offerings in engineering subjects dealing with infrastructure, the environment, and related issues, and greater concentration on high technology subjects, largely supporting increasingly complex scientific developments. While the latter is important, it should not be at the expense of more traditional engineering.

Rapidly developing economies such as China and India, as well as other industrial countries in Europe and Asia, continue to encourage and advance the teaching of engineering. Both China and India, respectively, graduate six and eight times as many traditional engineers as does the United States. Other industrial countries at minimum maintain their output, while America suffers an increasingly serious decline in the number of engineering graduates and a lack of well-educated engineers.

```
    """  
)
```

제로샷 분류(Zero-shot classification)

주어진 문장이 어떤 내용인지 분류

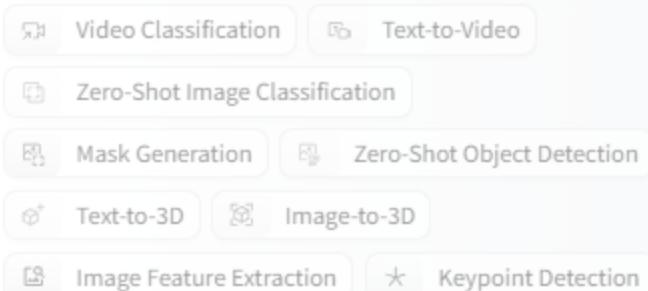
```
from transformers import pipeline  
  
classifier = pipeline("zero-shot-classification")  
  
classifier(  
    "This is a course about the Transformers library",  
    candidate_labels=["education", "politics", "business"],  
)  
 )
```

파이프라인에 Hub의 모델 적용

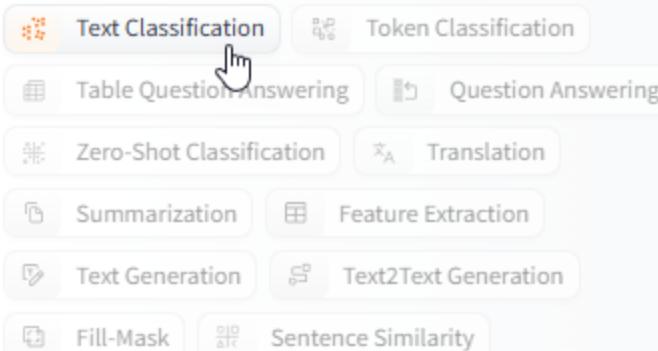
- Hub는 Hugging Face Hub를 의미하며, 딥러닝 모델, 데이터셋, 데모 앱 등을 공유할 수 있는 플랫폼
- Hub은 수많은 미리 학습된(pre-trained) 모델들이 있으며, pipeline 함수에서 model= "distilgpt2" 와 같이 모델 이름을 지정하면, Hub에서 해당 모델 파일을 자동으로 다운로드하여 로드/사용할 수 있음.

```
from transformers import pipeline

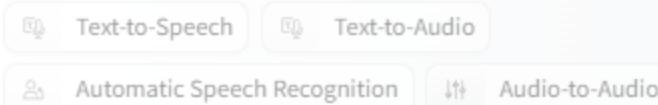
generator = pipeline("text-generation", model="distilgpt2")
generator(
    "In this course, we will teach you how to",
    max_length=30,
    num_return_sequences=2,
)
```



Natural Language Processing



Audio



https://huggingface.co/models?pipeline_tag=text-classification on

[facebook/fasttext-language-identification](#)

Text Classification • Updated Jun 9, 2023 • ↓ 242k • ❤ 201

[IDEA-CCNL/Erlangshen-Roberta-110M-Sentiment](#)

Text Classification • Updated May 25, 2023 • ↓ 3.21k • ❤ 62

[BAAI/bge-reranker-v2-gemma](#)

Text Classification • Updated Mar 19 • ↓ 14.1k • ❤ 48

[Alibaba-NLP/gte-multilingual-reranker-base](#)

Text Classification • Updated Aug 12 • ↓ 11k • ❤ 51

[arpanghoshal/EmoRoBERTa](#)

Text Classification • Updated Sep 12 • ↓ 5.19k • ❤ 104

[cardiffnlp/twitter-roberta-base-sentiment](#)

Text Classification • Updated Jan 20, 2023 • ↓ 4.36M • ❤ 271

[finiteautomata/bertweet-base-sentiment-analysis](#)

Text Classification • Updated Feb 17, 2023 • ↓ 297k • ⚡ • ❤ 147



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https://huggingface.co/SamLowe/roberta-base-go_emotio...

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SamLowe/**roberta-base-go_emotions**  like 458

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Overview

Model trained from [roberta-base](#) on the [go_emotions](#) dataset for multi-label classification.

ONNX version also available

A version of this model in ONNX format (including an INT8 quantized ONNX version) is now available at https://huggingface.co/SamLowe/roberta-base-go_emotions

Libraries

Downloads last month **2,046,261**  [Transformers](#)

Safetensors 

Model size 125M params Tensor type I64 · F32 

Inference API   Warm

 [Text Classification](#)  [Examples](#)

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● Sam Lowe

How to use from the **Transformers** library

```
# Use a pipeline as a high-level helper
from transformers import pipeline

pipe = pipeline("text-classification", model="SamLowe/roberta-base-go_emotions")
```

```
# Load model directly
from transformers import AutoTokenizer, AutoModelForSequenceClassification

tokenizer = AutoTokenizer.from_pretrained("SamLowe/roberta-base-go_emotions")
model = AutoModelForSequenceClassification.from_pretrained("SamLowe/roberta-base-go_emotions")
```

Quick Links

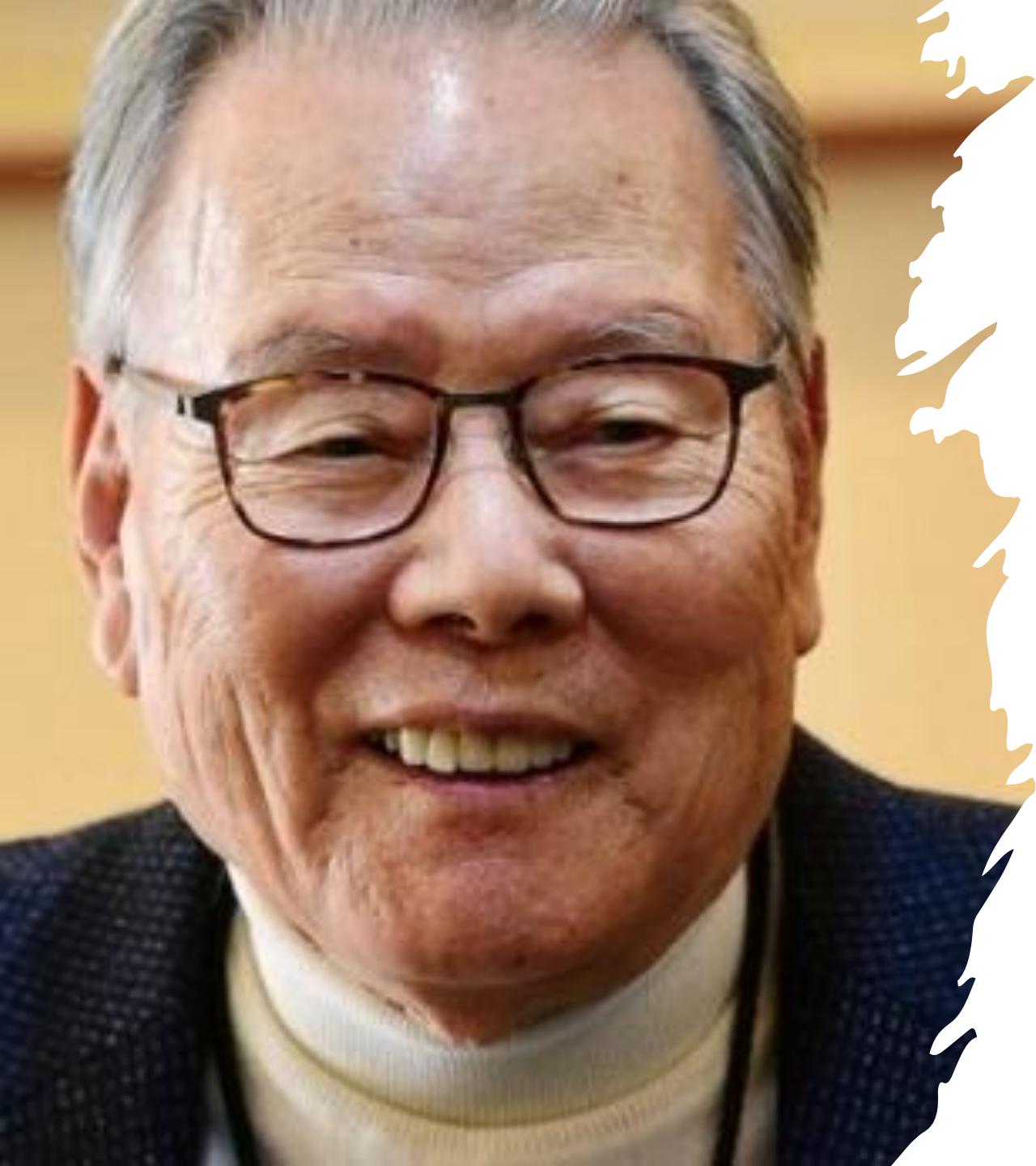
-  Read model documentation
-  Read docs on high-level-pipeline

https://huggingface.co/SamLowe/roberta-base-go_emotions

번역(Translation)

```
from transformers import pipeline  
  
translator = pipeline("translation", model="Helsinki-NLP/opus-mt-fr-en")  
translator("Ce cours est produit par Hugging Face.")
```

어려운 것? 아니 생소한 것.



말과 경쟁하려
하지 말고 말 위에
올라타라



패러다임 파괴자,
희생될 것인가, 올라탈 것인가?