

오픈소스를 통한 수식인식 및 이미지생성

```
18 REACT_ELEMENT_TYPE;
19 REACT_PROFILER_TYPE;
20 REACT_PROVIDER_TYPE;
21 REACT_STRICT_MODE_TYPE;
22 REACT_SUSPENSE_TYPE;
23 } from 'shared/ReactSymbols';
24 import {isValidElement} from 'shared/isValidElementType';
25 export function typeof(object: any) {
26   if (typeof object === 'object' && object !== null) {
27     const $$typeof = object.$$typeof;
28     switch ($$typeof) {
29       case REACT_ELEMENT_TYPE:
30         const type = object.type;
31         switch (type) {
32           case REACT_FRAGMENT_TYPE:
33           case REACT_PROFILER_TYPE:
34           case REACT_STRICT_MODE_TYPE:
35           case REACT_SUSPENSE_TYPE:
36             return type;
37           default:
38             const $$typeofType = type as TYPE_TO_NUMBER;
39             switch ($$typeofType) {
40               case REACT_CONTEXT_TYPE:
41               case REACT_FORWARD_REF_TYPE:
42               case REACT_LAZY_TYPE:
```



목차

01

- (개요)

02

- 제작과정

03

- 문제점 및 개선방안

- OCR 오픈소스(EasyOCR)
- 네이버 Clovaai의 CRAFT, deep-text-recognition benchmark을 기반으로 만든 오픈 소스 라이브러리
- 텍스트 감지 후 문자 인식 수행

The screenshot shows the Hugging Face Model Hub interface. At the top, there's a navigation bar with a profile icon, 'Models', 'GitHub', 'Discord', 'Docs', 'Cloud', and a search bar labeled 'Search models'. Below the search bar are several category buttons: 'Cloud', 'Embedding', 'Vision', 'Tools', 'Thinking', and 'Popular'. The main content area displays the 'gpt-oss' model card. The card includes the model name 'gpt-oss', a brief description 'OpenAI's open-weight models designed for powerful reasoning, agentic tasks, and versatile developer use cases.', and a list of tags: 'tools', 'thinking', 'cloud', '20b', and '120b'. It also shows metrics: 4.6M Pulls, 5 Tags, and an update timestamp 'Updated 1 month ago'.

The screenshot shows the GitHub repository page for 'EasyOCR'. The repository has 1.7.2 releases, an Apache-2.0 license, and over 4.6M pulls. It features sections for 'README', 'Apache-2.0 license', 'EasyOCR', 'pypi package 1.7.2', 'License Apache 2.0', 'Open in Colab', 'Tweet', 'twitter @JaideedAI', 'Try Demo on our website', 'Integrated into Huggingface Spaces 😊 using Gradio. Try out the Web Demo: 🎨 Hugging Face Spaces', 'What's new' (with a list of changes), 'What's coming next' (with a list of features), 'Examples' (with a preview of the OCR output on various documents), and 'Issues' (with a count of 1,700).

gpt-oss

OpenAI's open-weight models designed for powerful reasoning, agentic tasks, and versatile developer use cases.

[tools](#) [thinking](#) [cloud](#) [20b](#) [120b](#)

4.6M Pulls 5 Tags Updated 1 month ago

qwen3-vl

The most powerful vision-language model in the Qwen model family to date.

[vision](#) [tools](#) [cloud](#) [2b](#) [4b](#) [8b](#) [30b](#) [32b](#) [235b](#)

386.4K Pulls 59 Tags Updated 2 weeks ago

deepseek-r1

DeepSeek-R1 is a family of open reasoning models with performance approaching that of leading models, such as O3 and Gemini 2.5 Pro.

[tools](#) [thinking](#) [1.5b](#) [7b](#) [8b](#) [14b](#) [32b](#) [70b](#) [671b](#)

71.4M Pulls 35 Tags Updated 4 months ago

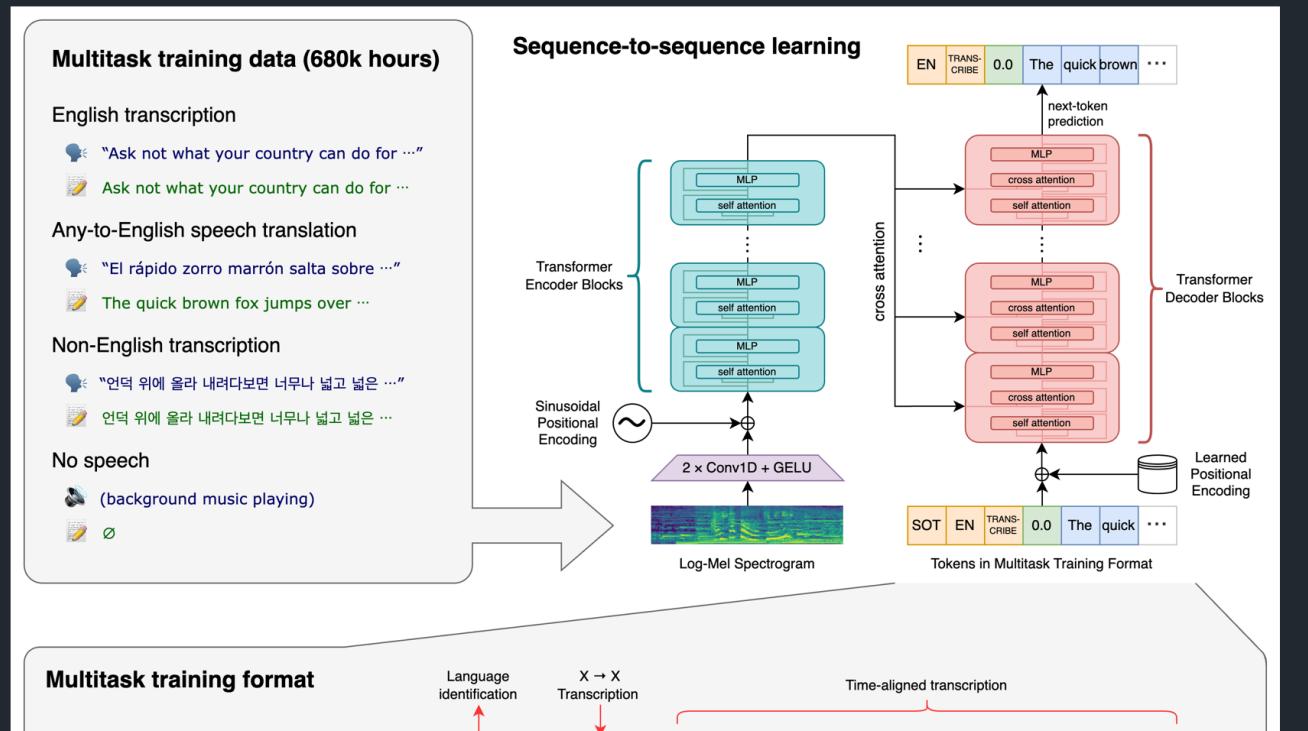
[README](#) [MIT license](#)

Whisper

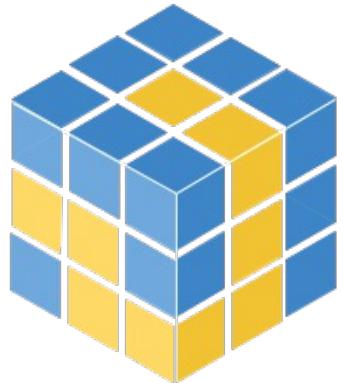
[\[Blog\]](#) [\[Paper\]](#) [\[Model card\]](#) [\[Colab example\]](#)

Whisper is a general-purpose speech recognition model. It is trained on a large dataset of diverse audio and is also a multitasking model that can perform multilingual speech recognition, speech translation, and language identification.

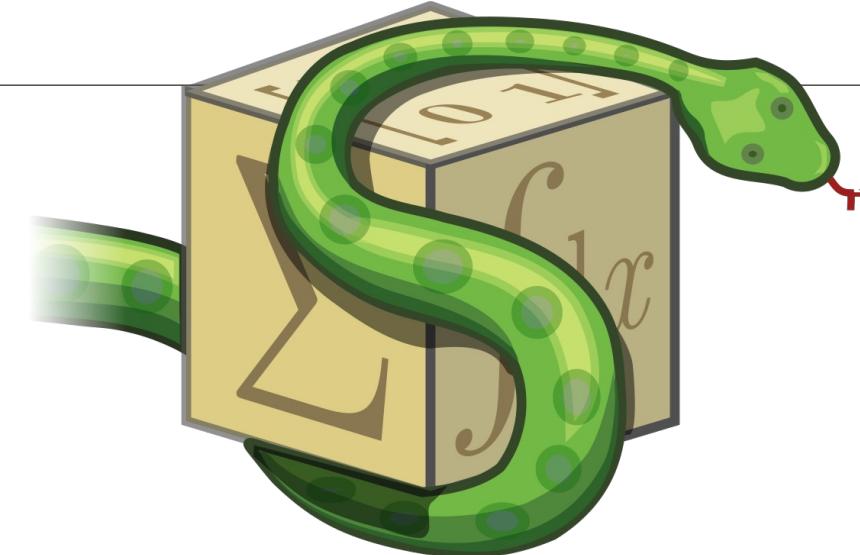
Approach



- Whisper(자동음성인식모델)
- OpenAI에서 개발한 자동음성인식(Automatic Speech Recognition, ASR) 모델
- 680,000시간 분량의 다국적-다목적 언어 데이터 학습



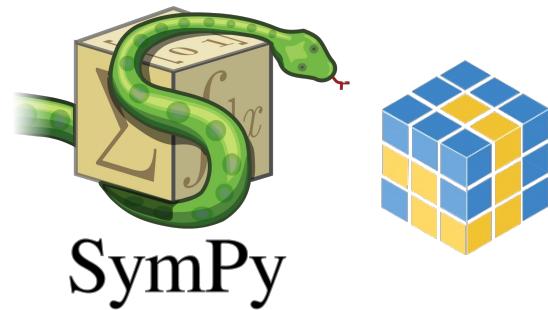
NumPy



SymPy

matplotlib

BSD



NumPy matplotlib



idejie/Pix2Tex

An Android application for transforming picture to Latex



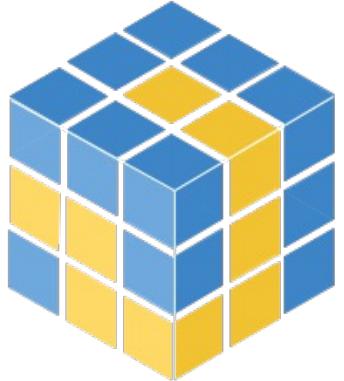
1
Contributor

0
Issues

0
Stars

1
Fork





NumPy

1.26.4(<-> 2.2.6)

--no-deps

사용 오픈소스

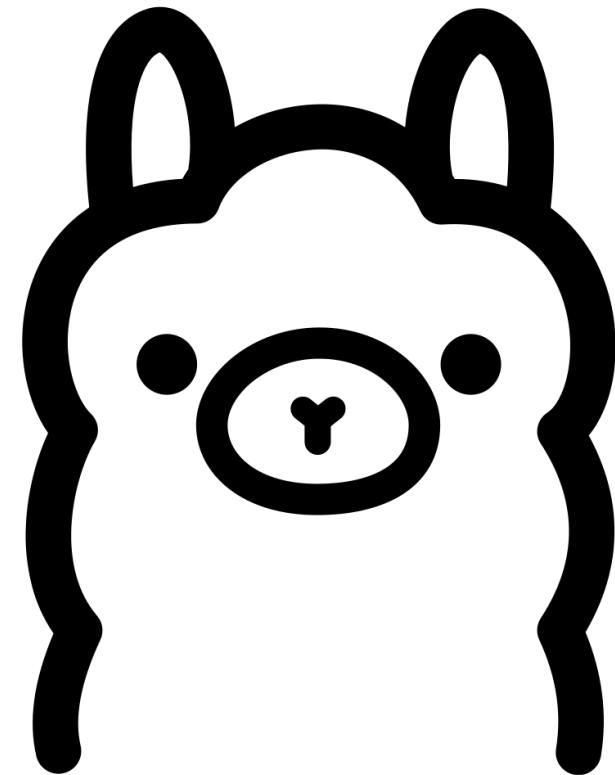
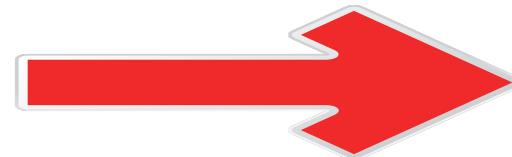


JaidedAI/EasyOCR

Ready-to-use OCR with 80+ supported languages and all popular writing scripts including Latin, Chinese, Arabic, Devanagari, Cyrillic and etc.



113 Contributors 17k Used by 74 Discussions 29k Stars 4k Forks



사용 오픈소스

gpt-oss

OpenAI's open-weight models designed for powerful reasoning, agentic tasks, and versatile developer use cases.

[tools](#) [thinking](#) [cloud](#) [20b](#) [120b](#)

↓ 5.1M Pulls [5 Tags](#) [Updated 2 months ago](#)

qwen3-vl

The most powerful vision-language model in the Qwen model family to date.

[vision](#) [tools](#) [cloud](#) [2b](#) [4b](#) [8b](#) [30b](#) [32b](#) [235b](#)

↓ 701.4K Pulls [59 Tags](#) [Updated 1 month ago](#)

minstral-3

The Minstral 3 family is designed for edge deployment, capable of running on a wide range of hardware.

[vision](#) [tools](#) [cloud](#) [3b](#) [8b](#) [14b](#)

↓ 76K Pulls [16 Tags](#) [Updated yesterday](#)

deepseek-r1

DeepSeek-R1 is a family of open reasoning models with performance approaching that of leading models, such as O3 and Gemini 2.5 Pro.

[tools](#) [thinking](#) [1.5b](#) [7b](#) [8b](#) [14b](#) [32b](#) [70b](#) [671b](#)

↓ 74M Pulls [35 Tags](#) [Updated 5 months ago](#)

qwen3-coder

Alibaba's performant long context models for agentic and coding tasks.

[tools](#) [cloud](#) [30b](#) [480b](#)

↓ 1.1M Pulls [10 Tags](#) [Updated 2 months ago](#)

gemma3

The current, most capable model that runs on a single GPU.

[vision](#) [cloud](#) [270m](#) [1b](#) [4b](#) [12b](#) [27b](#)

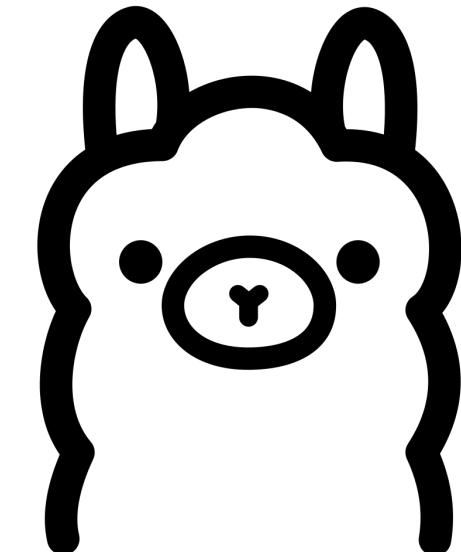
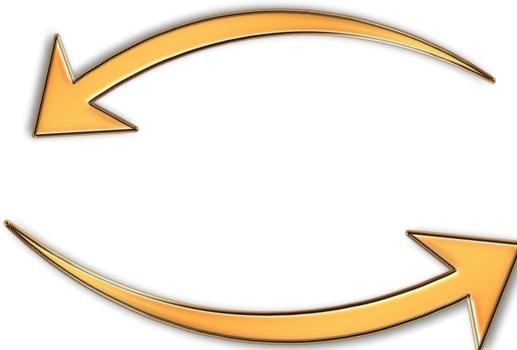
↓ 27.9M Pulls [29 Tags](#) [Updated 5 days ago](#)

glm-4.6

Advanced agentic, reasoning and coding capabilities.

[cloud](#)

↓ 31K Pulls [1 Tag](#) [Updated 1 month ago](#)



사용 오픈소스

OCR(easy ocr)(수식 인식 결과 저장)

Whisper(음성 인식 결과 저장)

LLM(두 값을 바탕으로 수정 및 코드 생성)

Sympy+matplotlib(구현)

OCR(Pix2Tex)(수식 인식 결과 저장)

LLM(Mistral 7B)(수식 변환에 따른 해설)

Sympy+matplotlib(구현)



$$\frac{d}{dx}(x \sin x + \cos x)$$



SymPy



matplotlib

idejie/Pix2Tex

An Android application for transforming picture to
Latex



1
Contributor



0
Issues



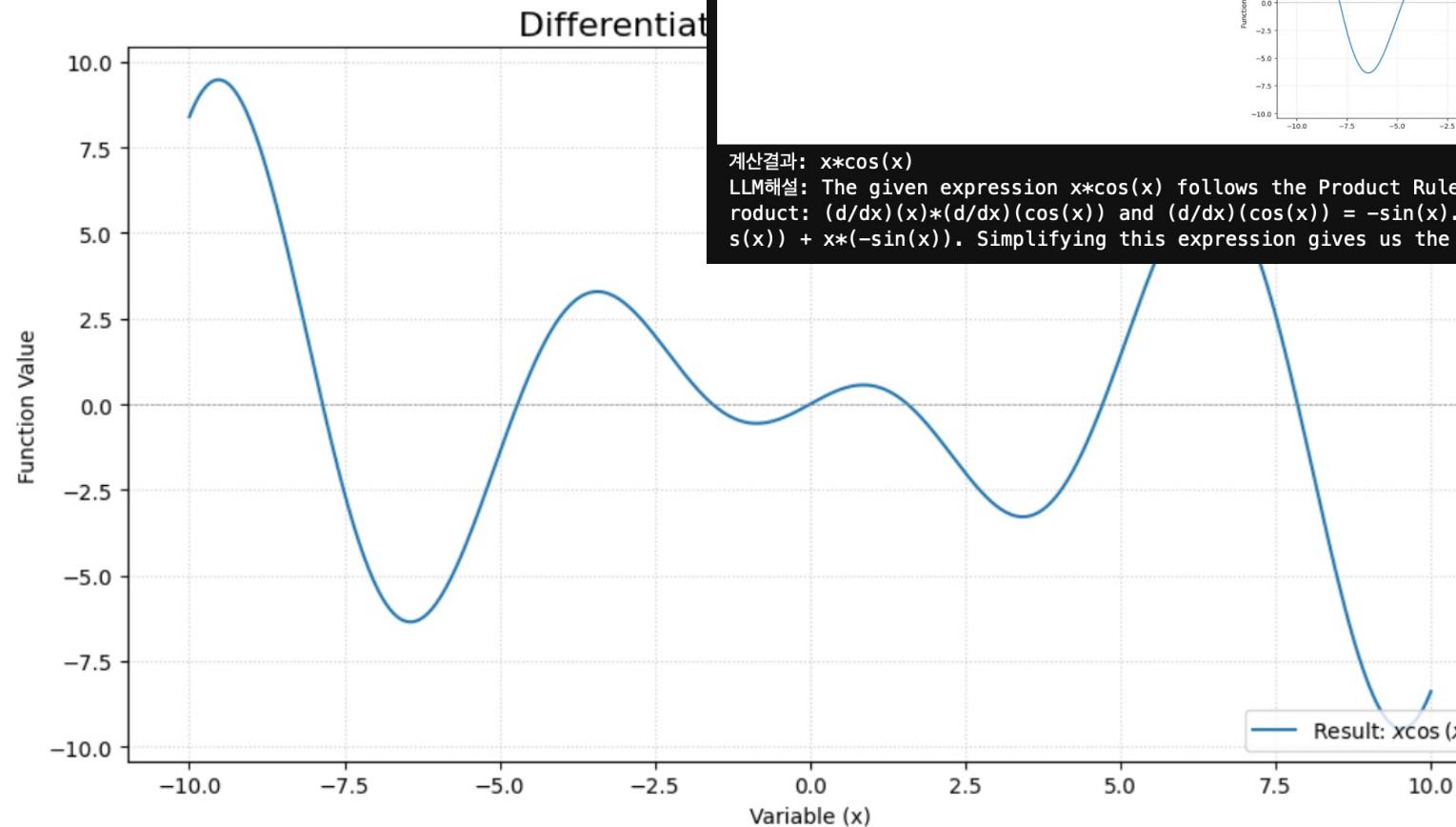
0
Stars



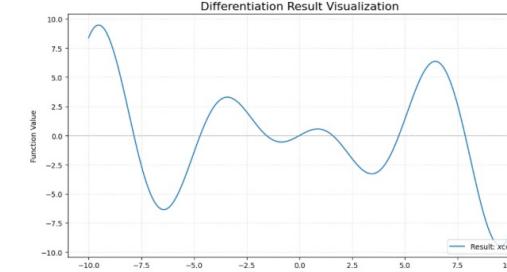
1
Fork



사용 오픈소스



LLM Analysis: The given expression $x\cos(x)$ follows the Product Rule of differentiation, where we apply the rule to each term in the product: $(d/dx)(x)\cdot(d/dx)(\cos(x))$ and $(d/dx)(\cos(x)) = -\sin(x)$. Therefore, the derivative of $x\cos(x)$ is: $d/dx(x\cos(x)) = 1\cdot(\cos(x)) + x\cdot(-\sin(x))$. Simplifying this expression gives us the resulting function as: $d/dx(x\cos(x)) = \cos(x) - x\sin(x)$.

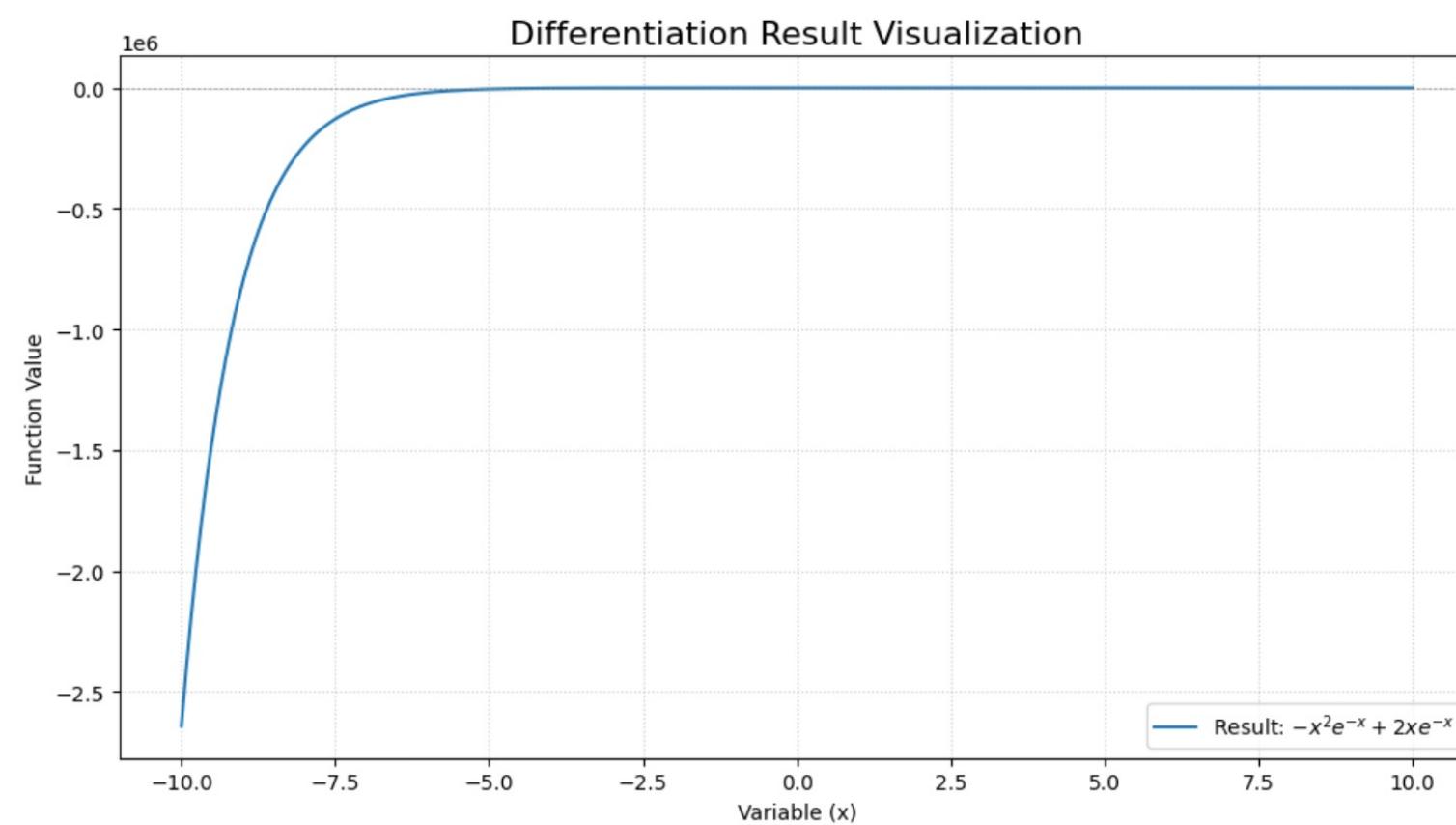


계산결과: $x\cos(x)$

LLM해설: The given expression $x\cos(x)$ follows the Product Rule of differentiation, where we apply the rule to each term in the product: $(d/dx)(x)\cdot(d/dx)(\cos(x))$ and $(d/dx)(\cos(x)) = -\sin(x)$. Therefore, the derivative of $x\cos(x)$ is: $d/dx(x\cos(x)) = 1\cdot(\cos(x)) + x\cdot(-\sin(x))$. Simplifying this expression gives us the resulting function as: $d/dx(x\cos(x)) = \cos(x) - x\sin(x)$.

계산결과: $x\cos(x)$

LLM해설: The given expression $x\cos(x)$ follows the Product Rule of differentiation, where we apply the rule to each term in the product: $(d/dx)(x)\cdot(d/dx)(\cos(x))$ and $(d/dx)(\cos(x)) = -\sin(x)$. Therefore, the derivative of $x\cos(x)$ is: $d/dx(x\cos(x)) = 1\cdot(\cos(x)) + x\cdot(-\sin(x))$. Simplifying this expression gives us the resulting function as: $d/dx(x\cos(x)) = \cos(x) - x\sin(x)$.



$$\frac{d}{dx} (x^2 e^{-x})$$



$$e^{-x}(2x - x^2)$$

