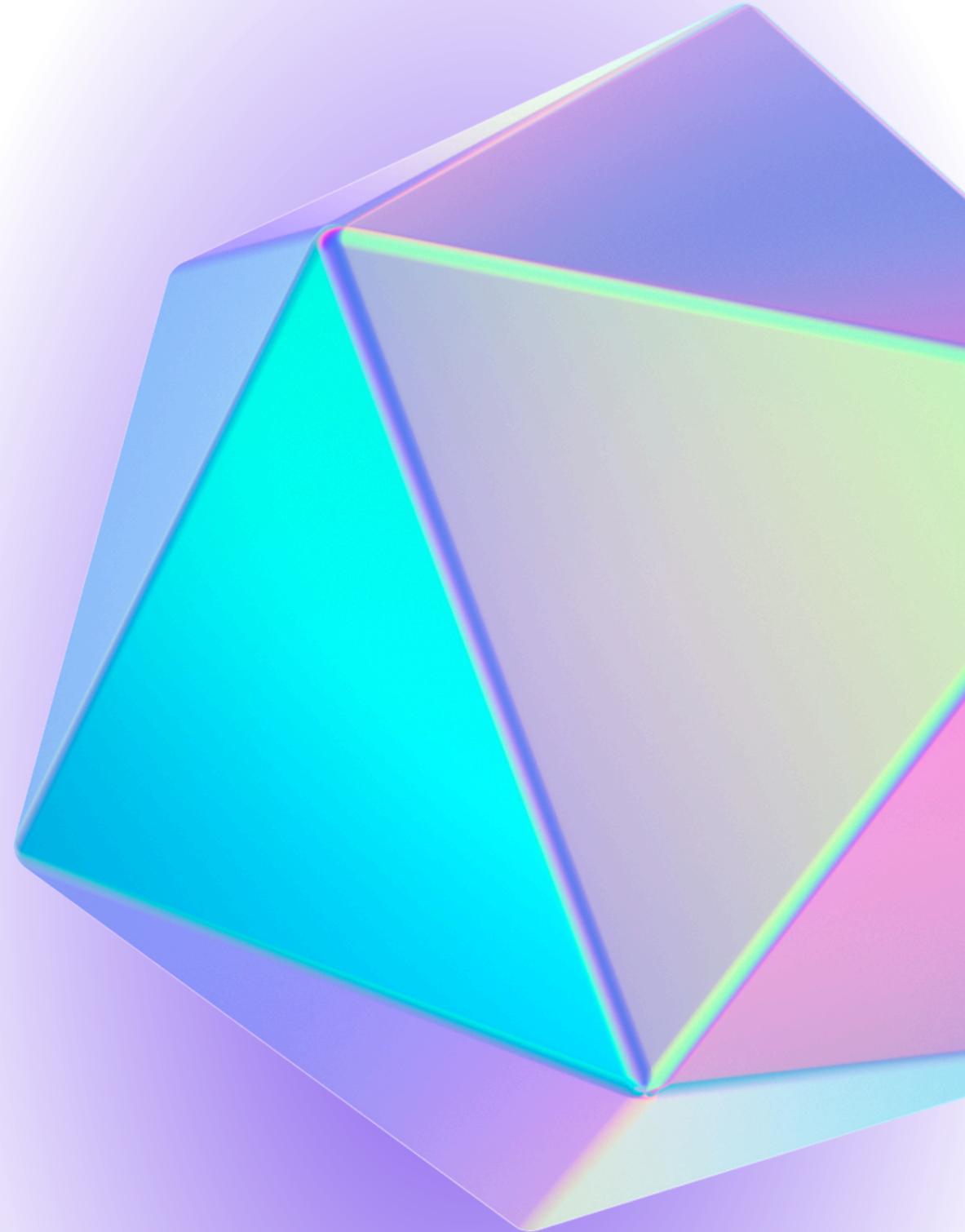


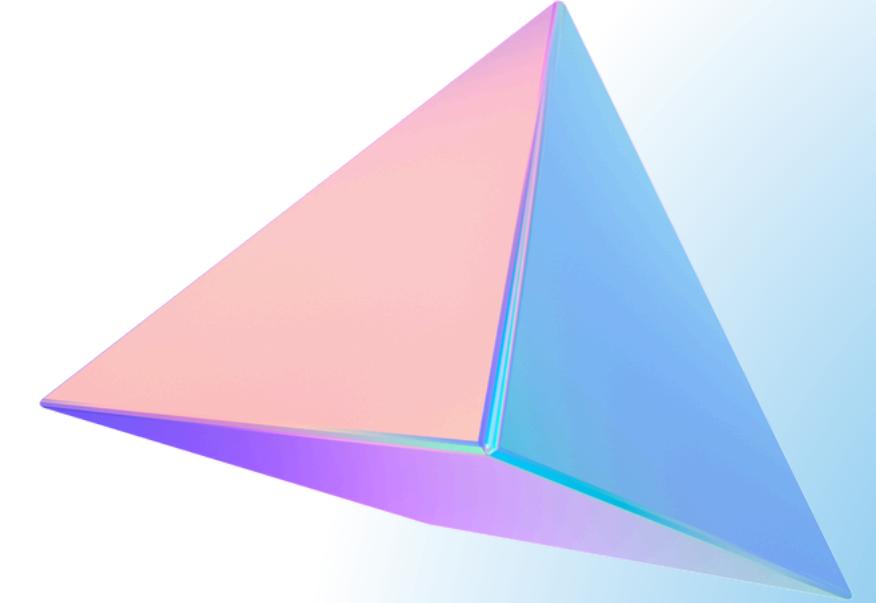
Otřensource

Presentation

오늘 뭐 입지?

내 옷들을 알아서 정리해줬으면 좋겠어!
옷장을 열지 않아도 내 옷을 보고 싶어!
서로의 옷장을 공유할 수 있었으면 좋겠어!



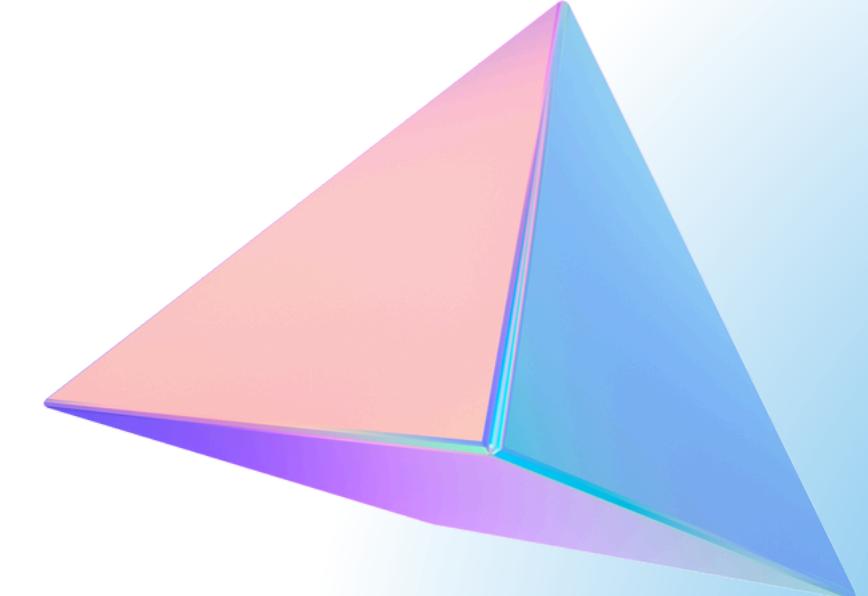


옷 + 오픈소스

스마트 옷장 + 패션 커뮤니티 + AI 기반 코디 추천



3가지 기능



1. AI 기반 옷 인식: 옷장의 카메라로 촬영된 이미지를 AI 이미지 비전 기술을 통해 옷의 종류, 색상, 재질, 패턴을 자동으로 분류
2. 사용자 앱 연동: 사용자 앱을 통해 옷의 사이즈, 브랜드 등의 추가 정보를 입력하고, 관리할 수 있습니다.
3. 기존 옷 인식: 사용자가 옷을 꺼내거나 다시 넣을 때, 카메라로 확인하여 이미 등록된 옷인지 확인할 수 있습니다.



Team



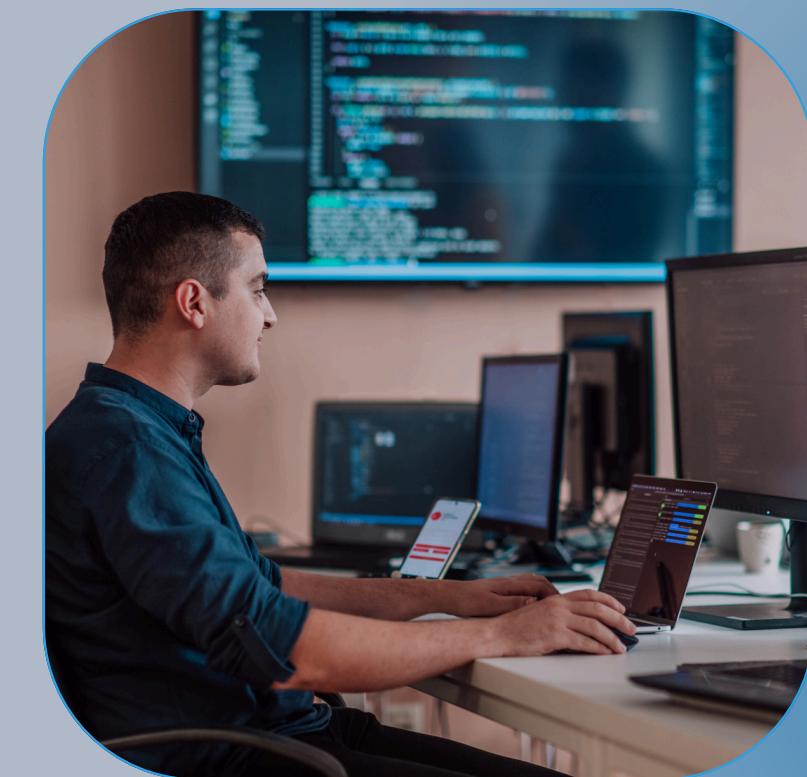
왕현성

Manager
AI Engineer



김민우

Data Engineer
Backend Developer



김형준

App Developer

Roadmap

1

- Data Schema Design
- Data Crawling
- Data Sorting
- Find AI Model

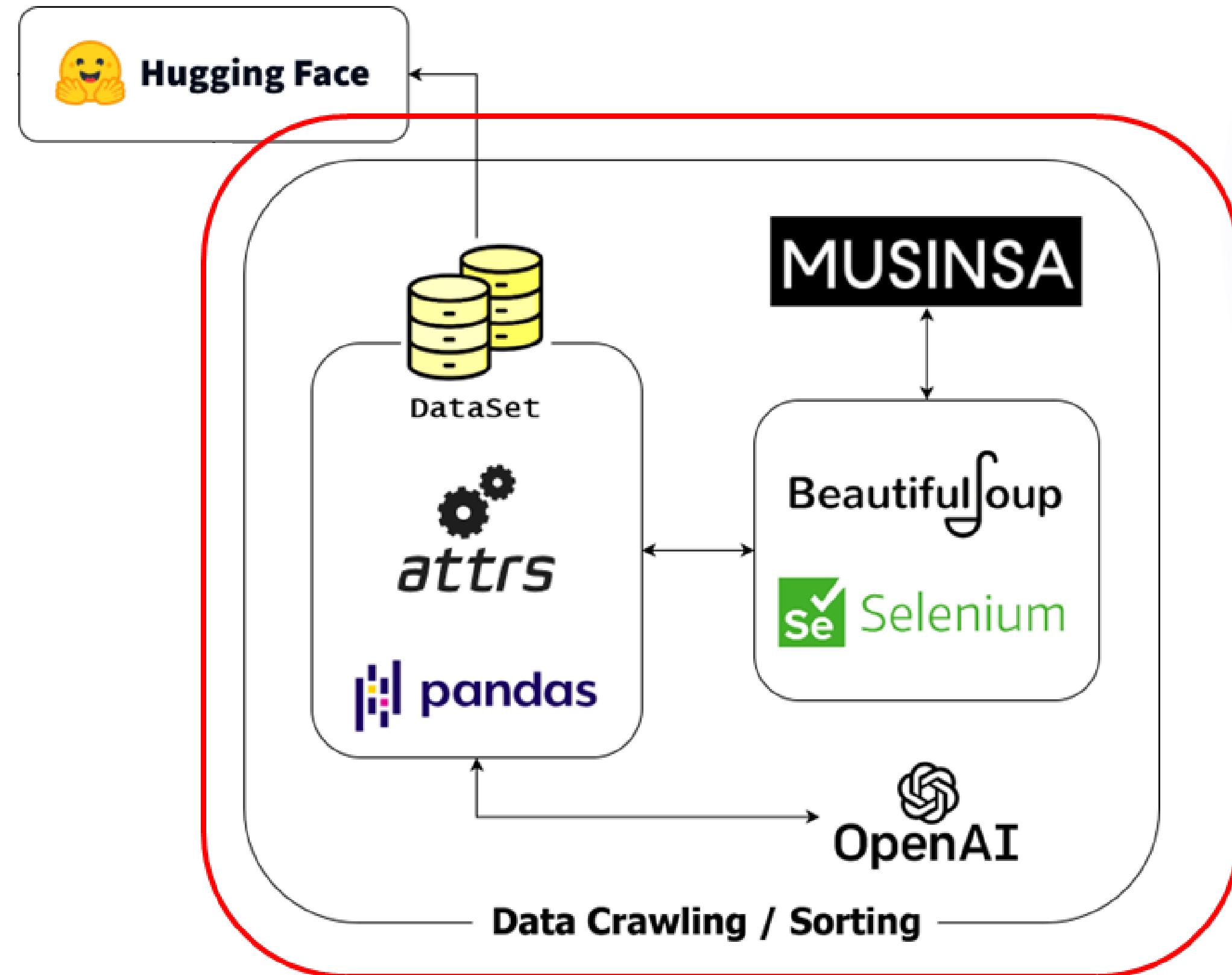
2

- Fine-Tuning
- AI Training
- Prompting
- AI testing

3

- Android App
- Backend Server
- Frontend UI/UX

Data Schema Design

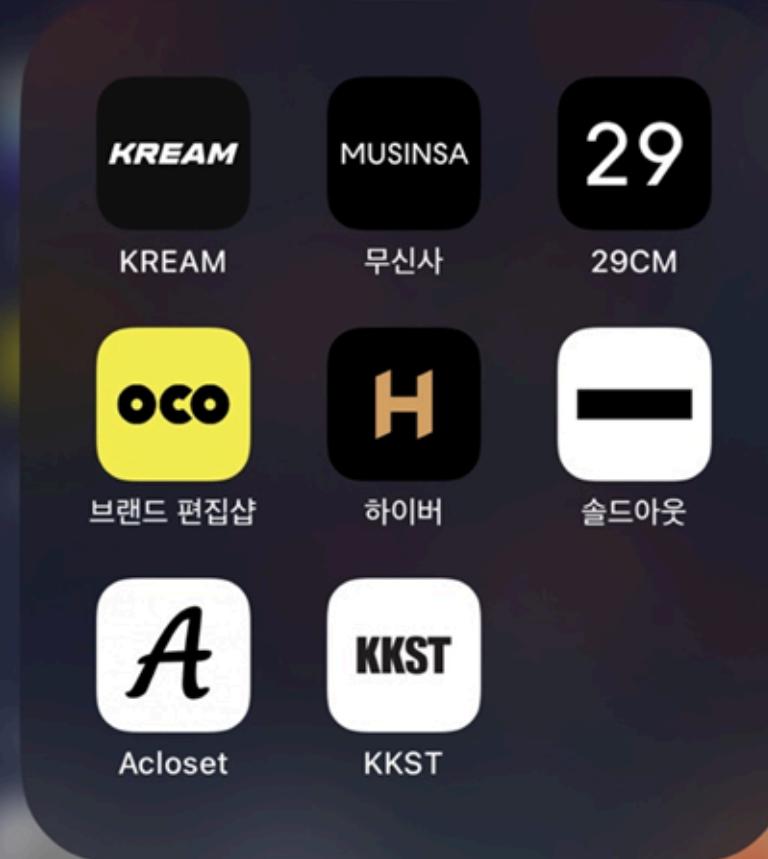


Data Crawling

데이터를 어디서 어떻게 모을까?



Fashion



Data Crawling

카테고리 서비스

전체 남성 여성

뷰티

big_category 상의

아우터
상의
바지
원피스/스커트
가방
패션소품
속옷/홈웨어
스포츠/레저
디지털/라이프
아울렛
부티크
키즈
바지

sub_category

전체보기

NEW

신상 니트/스웨터 맨투맨/스웨트

후드 티셔츠 셔츠/블라우스 피케/카라 티셔츠

긴소매 티셔츠 반소매 티셔츠 민소매 티셔츠

기타 상의

전체보기

어썸스튜디오

상의 > 니트/스웨터 (어썸스튜디오)

브이넥 스트라이프 니트 그린

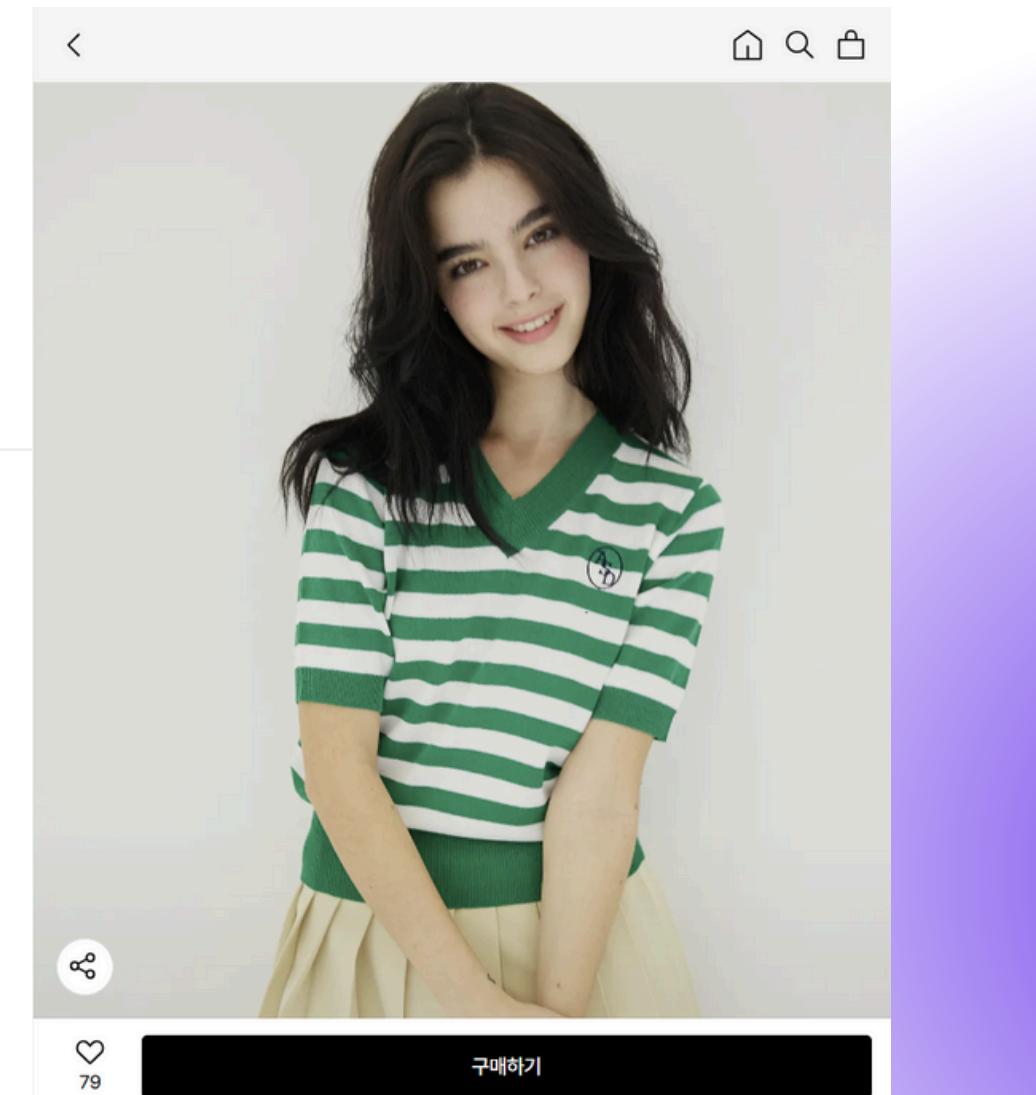
★ 5 후기 3개

59,000원
20% 47,200원

79 구매하기

정보 사이즈 추천 스냅·후기 문의

품번 ASCKPS007_2
성별 여
시즌 2023 SS
조회수 150회 이상 (최근 1개월)



Data Crawling

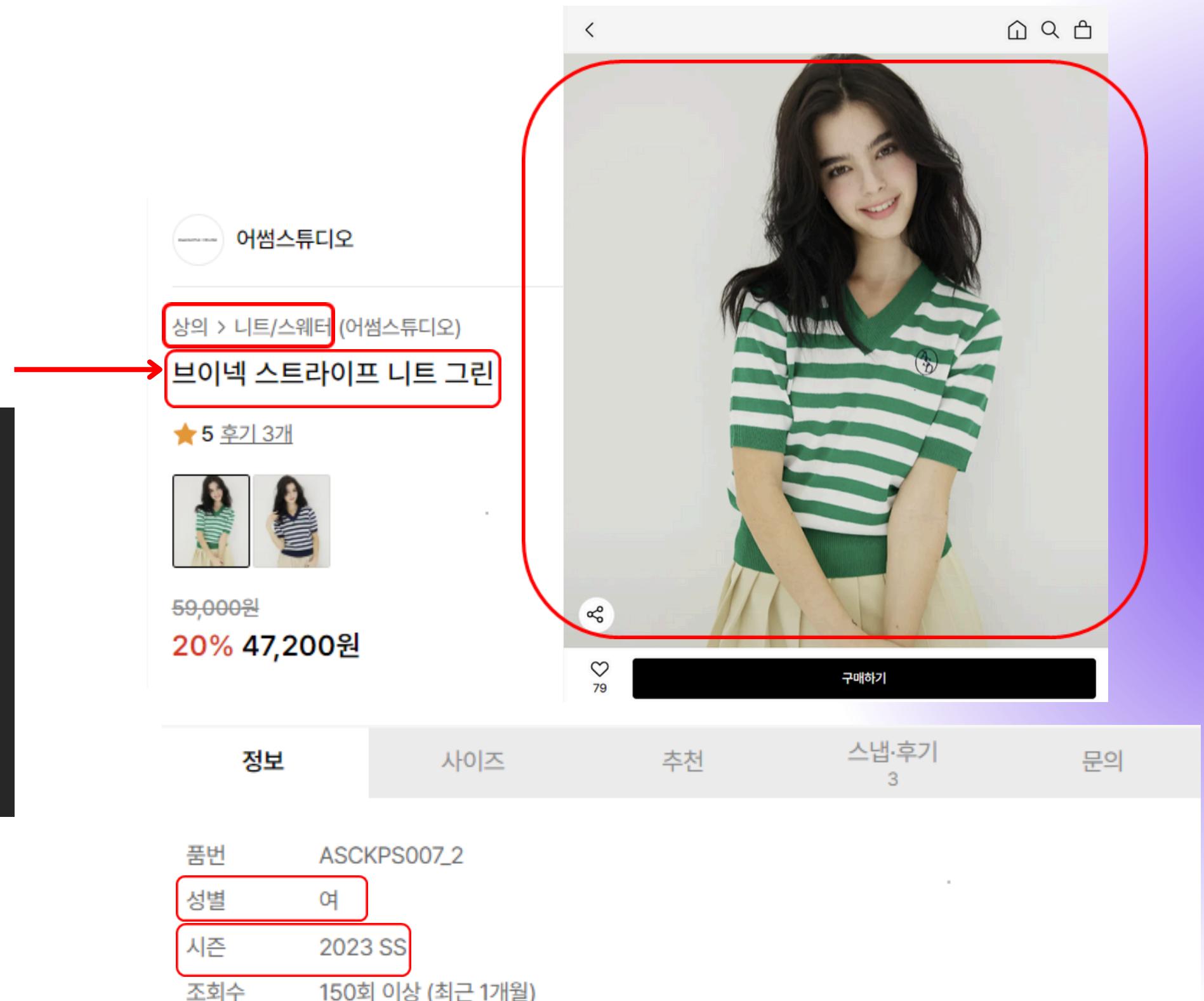
Problem

big_category
sub_category
gender
season
product_name
color
material
image_url
feature

원하던 데이터 정보

big_category
sub_category
gender
season
product_name
image_url

현실



Data Sorting

 OpenAI +
gpt-4o-mini

```
For example, if input is:  
{  
    "big_category": "아우터",  
    "sub_category": "무스탕/퍼",  
    "gender": "여",  
    "season": "FW",  
    "product_name": "시어링 자켓 블랙 ZG6MU605BK",  
    "image_url": "..."  
}  
  
We want an output like:  
{  
    "big_category": "아우터",  
    "sub_category": "무스탕/퍼",  
    "gender": "여",  
    "season": "FW",  
    "product_name": "시어링 자켓 블랙",  
    "color": "블랙",  
    "material": "시어링",  
    "feature": "자켓",  
    "image_url": "..."  
}
```

```
=  
{  
    "big_category": "상의",  
    "sub_category": "긴소매 티셔츠",  
    "gender": "남",  
    "season": "정보 없음",  
    "product_name": "슬림핏 사카리바 헨리넥 티셔츠 민트",  
    "color": "민트",  
    "material": "사카리바",  
    "feature": "슬림핏, 헨리넥, 티셔츠",  
    "image_url": "https://image.msscdn.net-thumbnails/..."  
},  
{
```

원하던 데이터 정보

prompt_template

Data Sorting

Hugging Face Search models, datasets, users...

Datasets: [hateslopacademy/otopensource_dataset](#) like 0

Tasks: [Image-to-Text](#) [Text Classification](#) Modalities: [Image](#) [Text](#) Formats: [json](#)

Tags: [fashion](#) [clothing](#) [e-commerce](#) [image-to-text](#) ko [Dataset Viewer](#) [Auto-converted to Parquet](#) [API](#) [Embed](#) [Full Screen Viewer](#)

Split (1)
train · 8.83k rows

Search this dataset [SQL Console](#)

big_category	sub_category	gender	season	product_name	color	material
string · classes 4 values	string · classes 52 values	string · classes 5 values	string · classes 3 values	string · lengths 0 - 72 ⚡	string · classes 983 values	string · classes 819 values
상의	상의	남	ss	남성 반팔 집업 티셔츠	블랙	
상의	기타 상의	남	ss	공용 쿨링 코튼 아노락 반팔 티셔츠	코튼	
상의	기타 상의	남	ss	공용 쿨링 코튼 아노락 반팔 티셔츠	코튼	

< Previous 1 2 3 ... 89 Next >

Tasks 1 Libraries Datasets Languages 1 Licenses Other

Filter Languages by name Reset Languages

- English multilingual Spanish German
- French Portuguese Chinese Italian
- Hindi Thai Russian Japanese
- Korean Vietnamese Turkish Southern Sami
- Northern Sami smi Lule Sami Inari Sami
- Arabic Latin Urdu Indonesian Persian
- Finnish Khmer Lao Malay Burmese
- Norwegian Norwegian Panjabi Polish
- Tagalog Afrikaans Amharic Assamese
- South Azerbaijani Belarusian Bulgarian
- Bambara Bengali Tibetan Bosnian
- Catalan Cebuano Czech Welsh
- Danish du Greek Esperanto Estonian
- Basque Irish Scottish Gaelic Galician
- Hausa Croatian Haitian Hungarian
- Igbo Icelandic iw Javanese Georgian
- Kikuyu Kazakh Luxembourgish Lingala
- Lithuanian Latvian Māori Marathi
- Maltese Occitan Quechua Romanian
- Sanskrit Sardinian Sindhi Sango
- Slovak Slovenian Samoan Somali
- Albanian Serbian Swati + 22 languages

Languages with no match

- Gujarati Malayalam Kannada Mongolian
- Enawené-Nawé Macedonian Sinhala
- Armenian Sundanese Azerbaijani code
- Pashto Malagasy Odia Kurayz Viddhich

Models 25

Filter by name

Full-text search

↑ Sort: Most downloads

- WueNLP/centurio_qwen**
Image-Text-to-Text · Updated 26 days ago · ↓ 3.54k · ❤ 7
- Blossom/llama-3.1-Korean-Blossom-Vision-8B**
Image-Text-to-Text · Updated Jan 4 · ↓ 997 · ❤ 106
- mistral-community/Pixtral-Large-Instruct-2411**
Image-Text-to-Text · Updated Dec 10, 2024 · ↓ 472 · ❤ 6
- WueNLP/centurio_aya**
Image-Text-to-Text · Updated 26 days ago · ↓ 146 · ❤ 4
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-4.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 101 · ❤ 1
- nintwentydo/Pixtral-Large-Instruct-2411**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 75 · ❤ 1
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-2.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 36
- fasoo/Qwen2-VL-7B-Instruct-KoDocOCR**
Image-Text-to-Text · Updated Dec 6, 2024 · ↓ 26
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-2.5bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 24
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-8.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 22
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-3.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 16
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-4.5bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 11 · ❤ 1
- NCSOFT/VARCO-VISION-14B-HF**
Image-Text-to-Text · Updated Dec 31, 2024 · ↓ 1.24k · ❤ 22
- NCSOFT/VARCO-VISION-14B**
Image-Text-to-Text · Updated Dec 31, 2024 · ↓ 889 · ❤ 22
- beomi/Llama-3-KoEn-8B-xtuner-llava-preview**
Image-Text-to-Text · Updated May 8, 2024 · ↓ 297 · ❤ 11
- HancomInSpaceAI/HillaVA-llama_3_1-8b**
Image-Text-to-Text · Updated Aug 30, 2024 · ↓ 112 · ❤ 6
- spow12/Pixtral-12b-korean-preview**
Image-Text-to-Text · Updated Nov 13, 2024 · ↓ 83 · ❤ 3
- TeamUNIVA/23MATHQ_TrOCR-large**
Image-Text-to-Text · Updated Aug 20, 2024 · ↓ 51
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-5.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 28
- nebchi/Llama3-Chat_Vector-kor_llava-v02**
Image-Text-to-Text · Updated Sep 11, 2024 · ↓ 24 · ❤ 1
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-3.5bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 24
- jp1924/KoLLaVa9b-patch14-384-stage1.0**
Image-Text-to-Text · Updated Dec 28, 2024 · ↓ 20
- nintwentydo/Pixtral-Large-Instruct-2411-ex12-6.0bpw**
Image-Text-to-Text · Updated Dec 21, 2024 · ↓ 15
- mistralai/Pixtral-Large-Instruct-2411**
Image-Text-to-Text · Updated Dec 26, 2024 · ↓ 8 · ❤ 394

선정 이유



자체 제작 한국어 데이터셋 활용

Category	Single turn	Multi turn
추론(Reasoning)	6.57	5.29
수학(Math)	6.43	6.29
글쓰기(Writing)	9.14	8.71
코딩(Coding)	8.00	9.14
이해(Understanding)	8.14	9.29
문법(Grammar)	6.71	4.86

Category	Score
Single turn	7.50
Multi turn	7.26
Overall	7.38


Colab Pro
A100 40GB



455.5203 seconds used for training.
7.59 minutes used for training.
Peak reserved memory = 7.943 GB.
Peak reserved memory for training = 4.011 GB.
Peak reserved memory % of max memory = 20.076 %.
Peak reserved memory for training % of max memory = 10.138 %.

Otpensource
dataset

**Otpensource
Vision - лога**

 **Hugging Face**

Models Datasets Spaces Posts Docs Enterprise Pricing 

hateslopacademy/otopensource-vision-lora   like 0

Text Classification Transformers Safetensors hateslopacademy/opensource_data Korean English vision-language korean image-to-text multilingual fashion e-commerce

text-generation-inference unsloth mllama lora Inference Endpoints License: cc-by-4.0

Model card Files and versions Community Settings  Train Deploy Use this model

main otopensource-vision-lora 1 contributor History: 5 commits + Add file

hateslopacademy	Update README.md	5c70504	VERIFIED	2 days ago
.gitattributes	Safe	1.52 kB		initial commit
README.md	Safe	4.28 kB		Update README.md
adapter_config.json	Safe	1.05 kB		Upload model trained with Unsloth
adapter_model.safetensors	Safe 	181 MB		Upload model trained with Unsloth
model.safetensors.index.json	Safe 	393 Bytes		Upload model.safetensors.index.json with huggingface_hub

Prompting

```
messages = [
    {"role": "user", "content": [
        {"type": "image"}, {"type": "text", "text": ""}
    ]},
    [{"text": "You are a professional fashion expert, and your task is to analyze clothing items based on the provided descriptions. Your responses should be detailed and structured, following the instructions below."}],
    [{"text": "### **Instructions**"}],
    [{"text": "- Identify the **type of clothing** and provide an appropriate category."}, {"text": "- Provide a **detailed and structured description** of the item."}, {"text": "- Your response must be written as **a single well-formatted paragraph**."}, {"text": "- Do **not** return JSON or bullet points; write a **single paragraph** response."}],
    [{"text": "### **What to Include in Your Response**"}],
    [{"text": "Your description should **naturally** incorporate the following elements:."}, {"text": "- **Clothing Type:** Clearly state the **category** of the item."}, {"text": "- **Gender Suitability:** Indicate whether this clothing item is suitable for men, women, or both genders."}, {"text": "- **Season Suitability:** Mention whether this clothing item is suitable for specific seasons (e.g., summer, winter)."}, {"text": "- **Color:** Describe the **dominant color(s)** visible in the item."}, {"text": "- **Material:** Identify the **fabric or material composition** of the item."}, {"text": "- **Extra Features:** Include **notable design elements** or unique features of the item."}, {"text": "- **Fit and Silhouette:** Describe whether the clothing item has a **classic, slim, or relaxed fit** and its overall silhouette."}, {"text": "- **Functionality:** Mention if the clothing is **casual, formal, or sporty**."}],
    [{"text": "### **Response Formatting**"}],
    [{"text": "- Your response must be a **single paragraph** with **natural language**."}, {"text": "- **Do NOT return JSON or bullet points.**"}, {"text": "- **Use a natural and detailed writing style.**"}],
    [{"text": "Your response should sound like a professional fashion expert. Be precise, avoid repetition, and ensure all necessary information is included."}]]
```

```
prompt = f"""
You are an AI fashion expert. Analyze the given clothing image description and return a structured JSON response.
```

Required JSON Structure

```
"big_category": "",  
"sub_category": "",  
"gender": "",  
"season": "",  
"color": "",  
"material": "",  
"feature": ""
```

Instructions

Sub Category Choices

What to Include in Your Response

Response Formatting

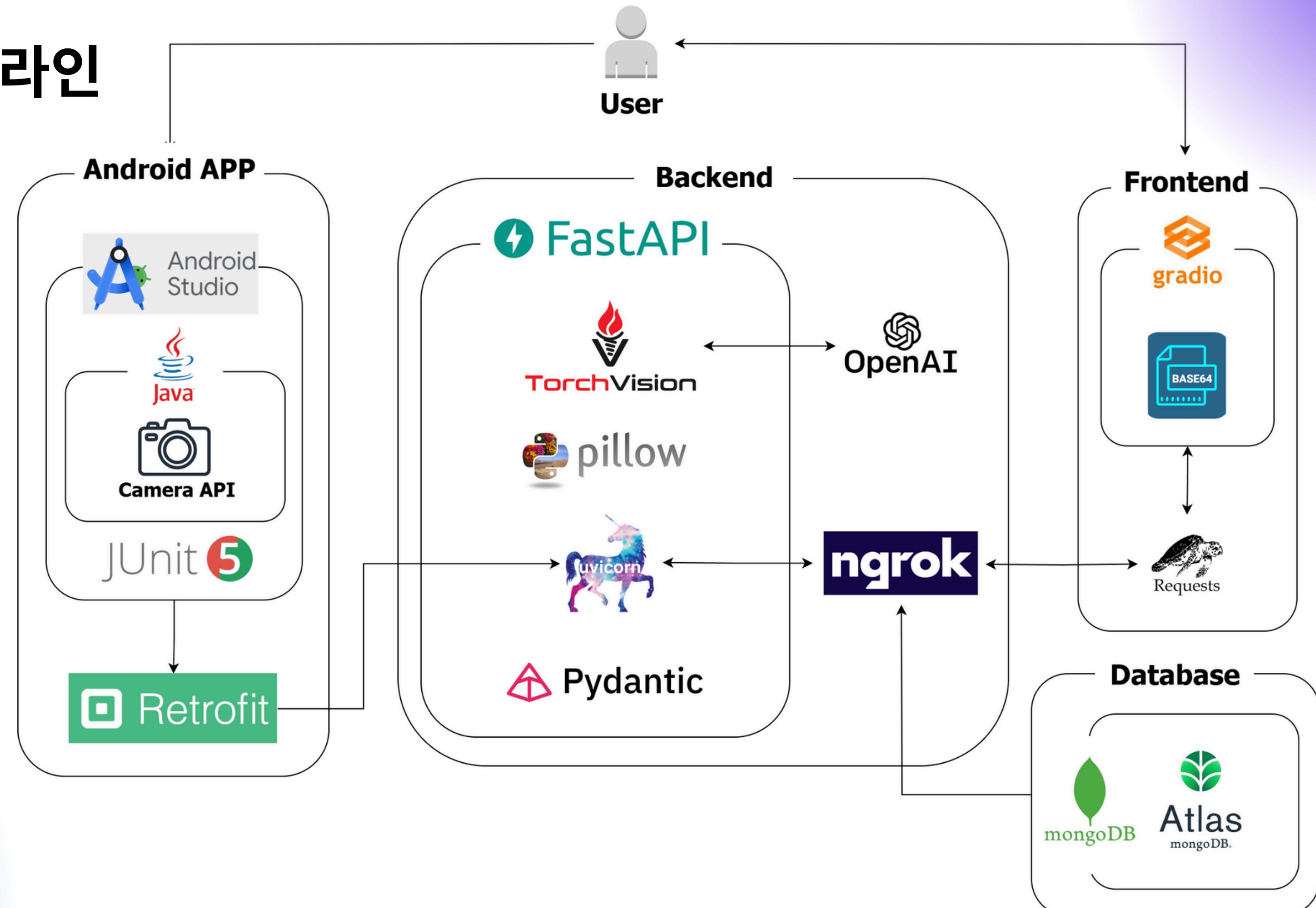
Response Guidelines

"{response_text}"

전체 파이프라인

python™

PyTorch



카메라 앱 UI

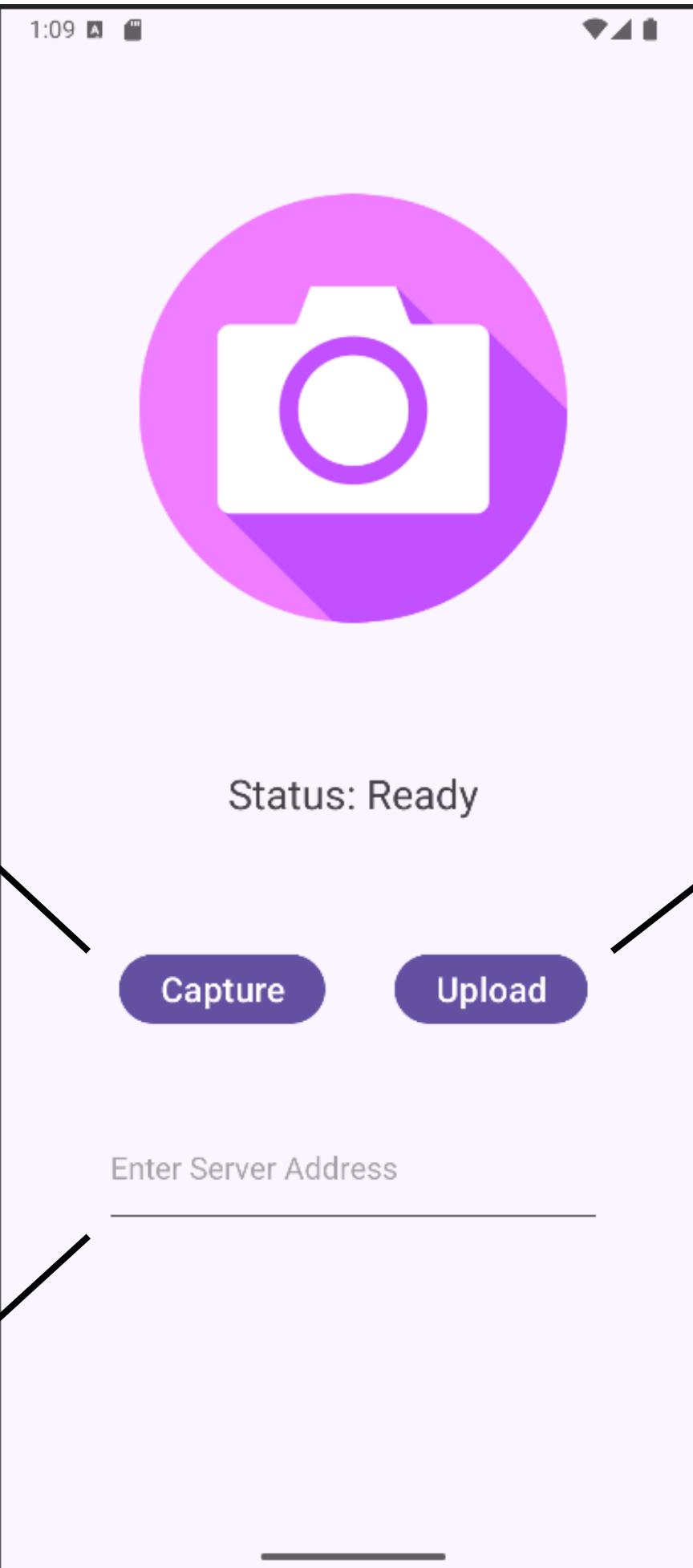


사진 촬영 후 전송

전송 백엔드 서버 입력

기존 갤러리 사진 전송



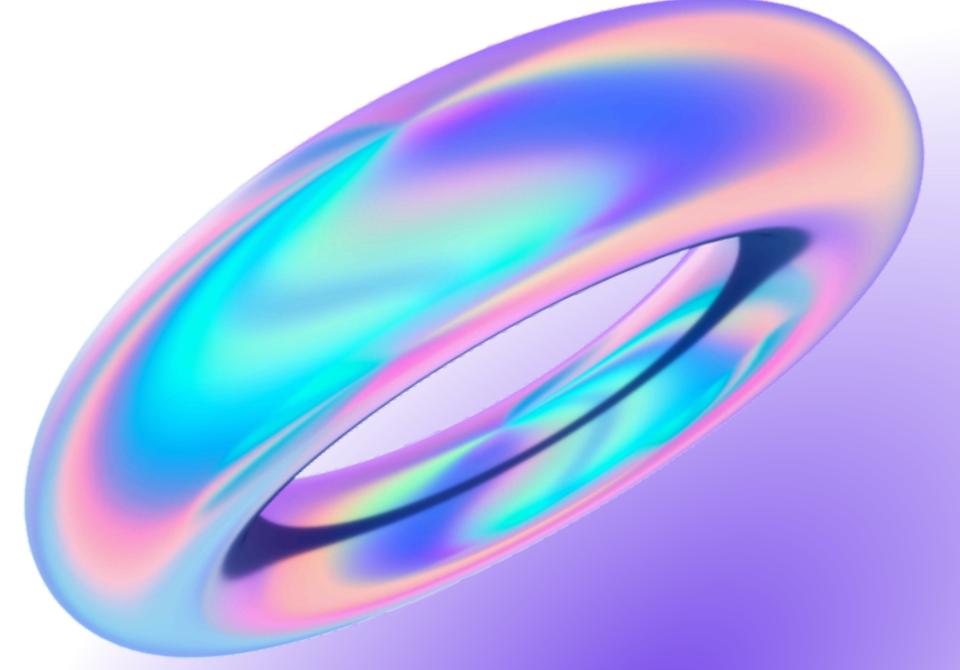
데모 시연

아쉬운 점

1. 언어적 한계: 현재 AI는 한국어의 복잡한 문맥과 미묘한 뉘앙스를 완벽히 이해하지 못해, 언어 처리에 제약이 존재
2. AI 분석 오류: 다양한 패턴과 텍스트를 분석할 때 찾은 오류가 발생하여, 핵심 데이터를 정확하게 인식하는 것이 어려움
3. 응답 지연: 모델이 결과를 반환하기까지 평균 15초가 소요되어, 즉각적인 피드백을 기대하는 사용자 경험에 부합하지 않음

개선 방향

1. 언어적 한계: 데이터셋은 영어 기반으로 구성하고, 출력 과정에서 한국어 처리를 위한 별도 학습을 진행해 실질적인 반환 품질을 향상
2. AI 분석 오류: 카테고리별 구분 대신 브랜드, 패턴, 디자인 등 세부 요소별로 추가 학습을 진행해 분석 정확도 개선
3. 응답 지연: 모델 경량화, 하드웨어 가속, 캐싱 등 다양한 기술을 도입해 응답 속도를 단축하는 방안 모색



감사합니다