

Hugging Face Hub

Model, Datasets, Spaces, and Much More



Hugging Face

Sergio Paniego Blanco

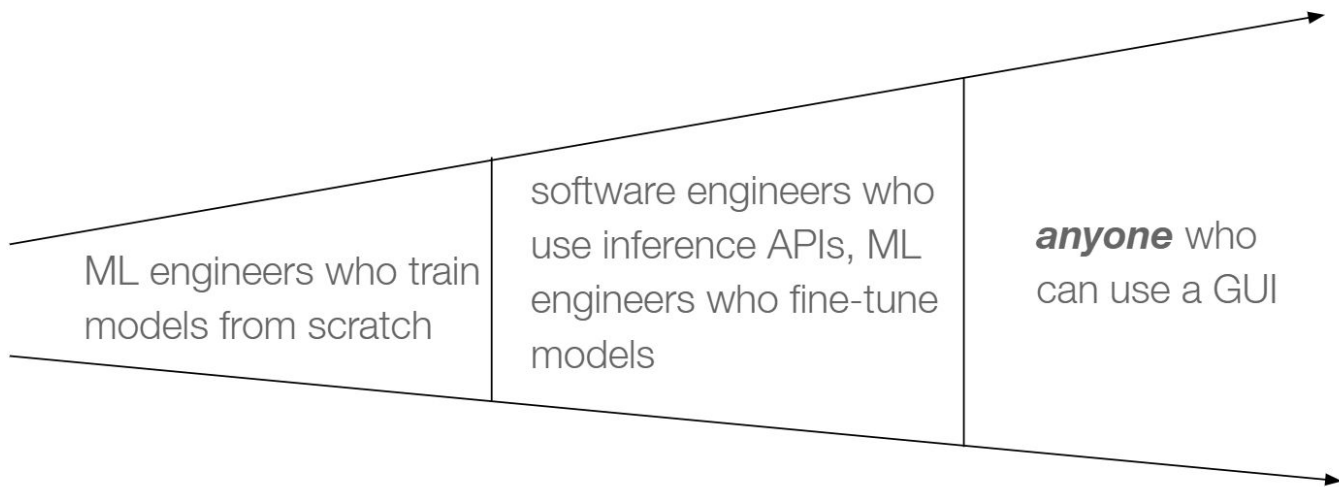
Machine Learning Engineer @ Hugging Face



What is Hugging Face

- AI open platform where AI developers share:
 - Models, datasets, papers, apps...
 - Posts, blogs...
- Set of open source projects to empower AI development and advancement:
 - transformers, datasets...

How Hugging Face Democratizes ML



DATASETS






MODELS



SPACES

Hugging Face Hub

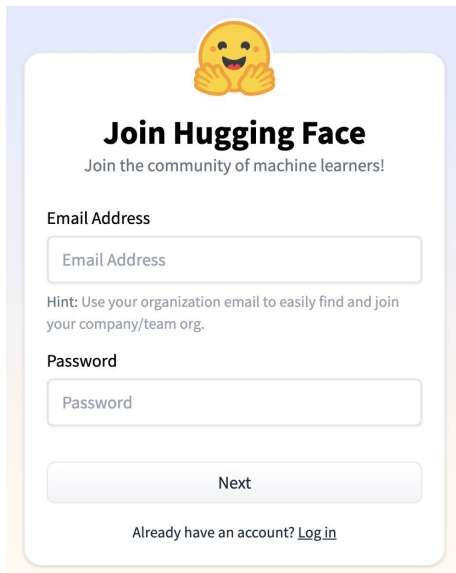
- >1.5 M models 
- > 300K datasets 
- >0.5 M apps 

Offers:


- Provides efficient/fast access storage with Xet
- Lightning inference speed with Inference Provider.
- Compute access
- Academia Hub

Creating a HF Hub account

- Let's create an account and explore the possibilities:
 - Go to hf.co/join



The image shows a registration form for Hugging Face. At the top is a yellow emoji with its hands clasped. Below it is the title "Join Hugging Face" and the subtitle "Join the community of machine learners!". The form has two input fields: "Email Address" and "Password". Below the email field is a hint: "Hint: Use your organization email to easily find and join your company/team org.". Below the password field is a "Next" button. At the bottom, there is a link: "Already have an account? [Log in](#)".



Join Hugging Face
Join the community of machine learners!

Email Address

Email Address

Hint: Use your organization email to easily find and join your company/team org.

Password

Password

Next

Already have an account? [Log in](#)

HF Hub profile

 Hugging Face

Search models, datasets, users...

 Models

 Datasets

 Spaces

 Posts

 Docs

 Enterprise

Pricing

⌵



9.2 TFLOPS

27 61 24

Sergio Paniego

PRO

sergiopaniego

👤 502 followers · 41 following

Edit profile

Settings

🌐 <https://sergiopaniego.github.io/>

✉ [sergiopaniego](#) 📧 [sergiopaniego](#)

📄 [sergio-paniego-blanco](#)

🔗 AI & ML interests

None yet

🔗 Recent Activity

🔗 New activity about 1 hour ago
nvidia/DAM-3B: Adding library_name to model card

🔗 New activity about 1 hour ago
nvidia/DAM-3B-Video: Adding library_name to model c...

🔗 New activity about 1 hour ago
nvidia/DAM-3B-Self-Contained: Adding library_nam...

View all activity

🏢 Organizations

📄 Articles 2

📄 Article

▲ 29

Welcoming Llama Guard 4 on Hugging Face Hub

📄 Article

▲ 89

The NLP Course is becoming the LLM Course!

[View all Articles](#)

📄 Spaces 22 🔍

⌵ Sort: Recently updated

📌 pinned Running Dev Mode

SmolVLM-trl-sft-ChartQA 🔥

Press to ask questions about charts in images

👤 sergiopaniego

Dec 17, 2024

📌 pinned Runtime error

SmolVLM-trl-dpo-raif-v 🔥

Generate answers from images and text

👤 sergiopaniego

Dec 17, 2024

📌 pinned Running on 4 ZERO

👤 10

Qwen2-VL-7B 🔥

Ask questions about images

👤 sergiopaniego

Oct 29, 2024

Running

Modernbert Banking77 Text Classifier 🔥

Classify banking-related queries

👤 sergiopaniego

8 days ago

📌 Sleeping

Template Final Assignment 🏆

Evaluate and submit answers to questions using an AI assistant

👤 sergiopaniego

11 days ago

📌 Build error Dev Mode private

Testtest 🔥

👤 sergiopaniego

11 days ago

Exploring models

- Going to [Models](#) and exploring trending/tasks/libraries...

The screenshot displays the Hugging Face website's 'Models' section. At the top, there's a navigation bar with links to Models, Datasets, Spaces, Posts, Docs, Enterprise, Pricing, and a user profile icon. Below this is a search bar and a filter dropdown set to 'Filter by name'. The main content area is divided into two columns. The left column lists various tasks under the 'Tasks' tab, including Multimodal (Audio-Text-to-Text, Image-Text-to-Text, Visual Question Answering, Document Question Answering, Video-Text-to-Text, Visual Document Retrieval, 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, 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), and Natural Language Processing (Text Classification, Token Classification, Table Question Answering, Question Answering, Zero-Shot Classification, Translation, Summarization, Feature Extraction, Text Generation, Text2Text Generation, Fill-Mask, Sentence Similarity, Text Ranking). The right column shows a list of models, each with its name, a brief description, and some statistics. The models listed include: nari-labs/Dia-1.68, microsoft/bitnet-b1.58-2B-4T, sand-ai/MAGI-1, HiDream-ai/HiDream-I1-Full, microsoft/MAI-05-R1, Shaker-Labs/FLUX.1-dev-ControlNet-Union-Pro-2.0, Wan-AI/Wan2.1-FLF2V-14B-720P, ByteDance-Seed/UI-TARS-1.5-7B, deepseek-ai/DeepSeek-V3-0324, THUDM/GLM-4-32B-0414, black-forest-labs/FLUX.1-dev, ostris/Flex.2-preview, bytedance-research/ChatTS-14B, l1llyasvie1/FramePackI2V_HY, Qwen/Qwen2.5-Omni-7B, microsoft/bitnet-b1.58-2B-4T-gguf, Comfy-Org/HiDream-I1-ComfyUI, nvidia/Llama-3.1-Nemotron-8B-UltraLong-4M-Instruct, hexgrad/Kokoro-82M, and OnomaAIRsearch/Illustrious-XL-v2.0.

Hugging Face Search models, datasets, users...

Models Datasets Spaces Posts Docs Enterprise Pricing

Tasks Libraries Datasets Languages Licenses Other

Filter Tasks by name

Multimodal

- Audio-Text-to-Text
- Image-Text-to-Text
- Visual Question Answering
- Document Question Answering
- Video-Text-to-Text
- Visual Document Retrieval
- 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
- 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

Natural Language Processing

- Text Classification
- Token Classification
- Table Question Answering
- Question Answering
- Zero-Shot Classification
- Translation
- Summarization
- Feature Extraction
- Text Generation
- Text2Text Generation
- Fill-Mask
- Sentence Similarity
- Text Ranking

Models 1,631,483 Filter by name Full-text search 11 Sort: Trending

- nari-labs/Dia-1.68**
Text-to-Speech · Updated about 2 hours ago · 18.7k · 676
- sand-ai/MAGI-1**
Image-to-Video · Updated 2 days ago · 262
- microsoft/MAI-05-R1**
Text Generation · Updated about 18 hours ago · 1.19k · 212
- Wan-AI/Wan2.1-FLF2V-14B-720P**
Updated 6 days ago · 13.3k · 147
- deepseek-ai/DeepSeek-V3-0324**
Text Generation · Updated 28 days ago · 252k · 2.73k
- black-forest-labs/FLUX.1-dev**
Text-to-Image · Updated Aug 16, 2024 · 2.09M · 9.92k
- bytedance-research/ChatTS-14B**
Text Generation · Updated about 2 hours ago · 388 · 83
- Qwen/Qwen2.5-Omni-7B**
Any-to-Any · Updated 8 days ago · 202k · 1.46k
- Comfy-Org/HiDream-I1-ComfyUI**
Updated 7 days ago · 85
- hexgrad/Kokoro-82M**
Text-to-Speech · Updated 13 days ago · 1.95M · 4.1k
- microsoft/bitnet-b1.58-2B-4T**
Text Generation · Updated about 3 hours ago · 21.5k · 705
- HiDream-ai/HiDream-I1-Full**
Text-to-Image · Updated 1 day ago · 28.2k · 705
- Shaker-Labs/FLUX.1-dev-ControlNet-Union-Pro-2.0**
Text-to-Image · Updated 1 day ago · 13.4k · 197
- ByteDance-Seed/UI-TARS-1.5-7B**
Image-Text-to-Text · Updated 6 days ago · 5.5k · 113
- THUDM/GLM-4-32B-0414**
Text Generation · Updated 9 days ago · 5.83k · 205
- ostris/Flex.2-preview**
Text-to-Image · Updated about 18 hours ago · 84 · 83
- l1llyasvie1/FramePackI2V_HY**
Updated 10 days ago · 145k · 74
- microsoft/bitnet-b1.58-2B-4T-gguf**
Text Generation · Updated about 12 hours ago · 16.4k · 112
- nvidia/Llama-3.1-Nemotron-8B-UltraLong-4M-Instruct**
Text Generation · Updated 6 days ago · 2.58k · 96
- OnomaAIRsearch/Illustrious-XL-v2.0**
Updated 4 days ago · 65

Exploring models

Examples of models :

- [Gemma 3 \(Google\)](#)
- [Llama 4 \(Meta\)](#)
- [Aya Expanse 8B \(Cohere\)](#)
- [Gemma 3 GGUF \(Unsloth\)](#)
- [DeepSeek R1 \(DeepSeek\)](#)
- [Flux.1 \(Black Forest\)](#)
- [MobileNet \(Timm\)](#)
- [SmolVLM2 \(Hugging Face\)](#)



timm



Exploring datasets

● Datasets

The screenshot shows the Hugging Face Datasets page. The top navigation bar includes the Hugging Face logo, a search bar, and links to Models, Datasets, Spaces, Posts, Docs, Enterprise, Pricing, and a user profile. The left sidebar contains filters for Modalities (3D, Audio, Geospatial, Image, Tabular, Text, Time-series, Video), Size (rows) with a slider from <1K to >1T, and Format (json, csv, parquet, imagefolder, soundfolder, webdataset, text, arrow). The main content area displays a grid of dataset cards, each with a title, a 'Viewer' link, and metadata including update time, size, and likes.

Hugging Face Search models, datasets, users...

Models Datasets Spaces Posts Docs Enterprise Pricing

Datasets 366,444 Filter by name Full-text search Sort: Trending

Modalities

3D Audio Geospatial Image Tabular Text Time-series Video

Size (rows)

<1K >1T

Format

json csv parquet imagefolder soundfolder webdataset text arrow

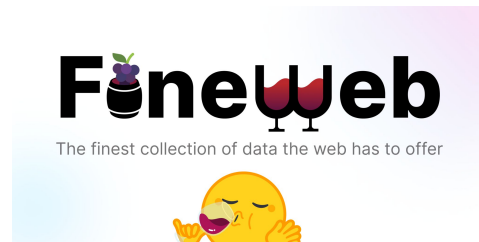
Dataset Cards:

- zwhe99/DeepMath-103K**
Viewer • Updated 5 days ago • 103k • 9.8k • 137
- Anthropic/values-in-the-wild**
Preview • Updated 3 days ago • 185 • 85
- nvidia/OpenCodeReasoning**
Viewer • Updated 8 days ago • 753k • 11.9k • 283
- OpenGVLab/InternVL-Data**
Preview • Updated about 11 hours ago • 634 • 42
- openai/mcrr**
Viewer • Updated 9 days ago • 2.4k • 2.73k • 125
- fka/awesome-chatgpt-prompts**
Viewer • Updated Jan 6 • 203 • 11.5k • 7.72k
- future-technologies/Universal-Transformers-Dataset**
Viewer • Updated 8 days ago • 70.1M • 4.57k • 72
- nvidia/ClimbLab**
Viewer • Updated 2 days ago • 1.1B • 9.83k • 28
- nvidia/Llama-Nemotron-Post-Training-Dataset**
Viewer • Updated 7 days ago • 3.91M • 7.19k • 423
- bh2821/LightNovel5000**
Viewer • Updated 7 days ago • 6.12M • 646 • 24

Exploring datasets

Example of datasets 📁 :

- [FineWeb \(Hugging Face\)](#)
- [HH-RLHF \(Anthropic\)](#)
- [Wikipedia \(Wikimedia\)](#)
- [The Cauldron \(Hugging Face\)](#)



ANTHROPIC



Exploring Spaces

● AI apps!


 **Spaces** · The AI App Directory

[+ New Space](#)

[What is Spaces?](#)

Ask anything you want to do with AI



 Image Generation  Video Generation  Text Generation  Language Translation  Speech Synthesis  3D Modeling  Object Detection  Text Analysis  Image Editing  Code Generation  Question Answering  Data Visualization  Voice Cloning >

 **Spaces of the week**

< 21 Apr 2025 >


Filter by name



Sort: Relevance

Running on  ZERO  334

Dia 1.6B 🚀


Generate audio from text using Nari TTS



 nari-labs 1 day ago

Running on  ZERO  27

Chat with Bitnet-b1.58-2B-4T 🚀


Chat with Microsoft's 1.58bit Bitnet model!



 suayptalha 3 days ago

Running on  ZERO  27

Vevo for Zero-shot VC, TTS, and More 🚀


Controllable Zero-Shot Voice Imitation


 amphion about 6 hours ago

Running on  ZERO  16

MESA 🚀


Text-to-terrain model (reflectance and elevation)



 mikonvergence 7 days ago

Running  27

MotionShop2 🚀


Replace characters in a video with characters in photos



 3DAIGC 8 days ago

Running on  ZERO  29

DetailGen3D 🚀


Generate detailed 3D models from reference images and coarse models



 VAST-AI 5 days ago

Running on  ZERO  42

FLUX.1 Dev ControlNet Union Pro 2.0 🚀


Create images using prompts and control images

 Shakker-Labs 6 days ago


Running on  ZERO  30

AudioX 🚀

Generate audio and video from text prompts

 Zeyue7 7 days ago

Exploring Spaces

- HF Spaces
- Some examples  :
 - DeepSite: generates websites using DeepSeek
 - InstantCoder: generated apps using Gemini
 - OminiControl Art: transform images into artistic styles
 - Dia-1.6B: Nari text-to-Speech synthesis
 - Kolors-Virtual-Try-On: try clothes on people

Open Source projects

- [HF Hub](#): Repository for models, datasets, and collaborative spaces.
- [transformers](#): Library for using and training NLP, vision, and audio models.
- [datasets](#): Easy access to thousands of ML datasets.
- [accelerate](#): Simplifies distributed and multi-GPU training.
- [diffusers](#): Library for image generation with diffusion models.
- [peft](#): Efficient fine-tuning of large models (LoRA, etc.).



Transformers



Datasets



Accelerate



Diffusers



PEFT

Open Source projects

- [LeRobot](#): Library for using LLMs as robot controllers.
- [transformers.js](#): Run Transformers models directly in JavaScript.
- [smolagents](#): Lightweight agents combining language and reasoning.
- [trl](#): Fine-tuning LLMs with reinforcement learning (RLHF).
- [pytorch-image-models \(timm\)](#): Collection of SOTA vision models in PyTorch.
- [gradio](#): Quickly build web interfaces for AI models.



Transformers.js



smolagents



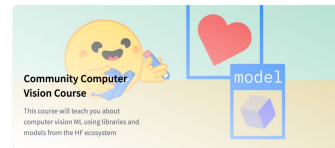
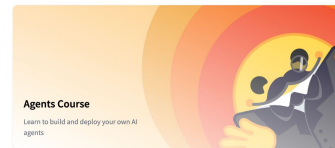
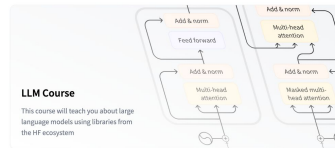
timm



Education-Community

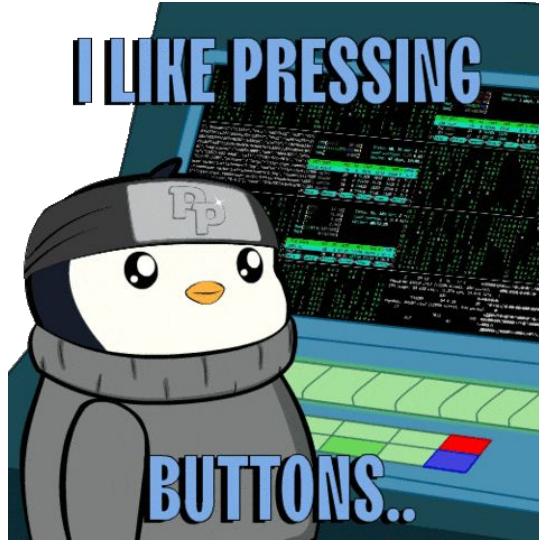
- [Learn](#)
- [Blog](#)
 - [The Ultra-Scale Playbook](#)
- [Community articles](#)
- [Papers](#)
- Leaderboards
 - [Chatbot Arena](#)
 - [OpenVLM Leaderboard](#)
 - [GAIA](#)
- [Discord](#)

Learn



Let's get to code! 🧑💻

- Let's use HF in code!



Let's get to code!

- We'll review some key functionalities of HF
 - Pipeline
 - Transformers
 - Download and use model
 - Datasets
 - Download and access dataset
 - Train model combining both
 - Deploy trained model to Gradio app in HF (ZeroGPU)
 - See where to find more examples!

Thanks! 🎉



Hugging Face