HUGGING FACE LAB MANUAL

What is Hugging Face and Why Should We Learn it ?

A Hugging Face account is your gateway to the vibrant AI community and platform focused on machine learning (ML) models, datasets, and applications

It is a hub for exploring, sharing, and collaborating on cutting-edge AI technology.
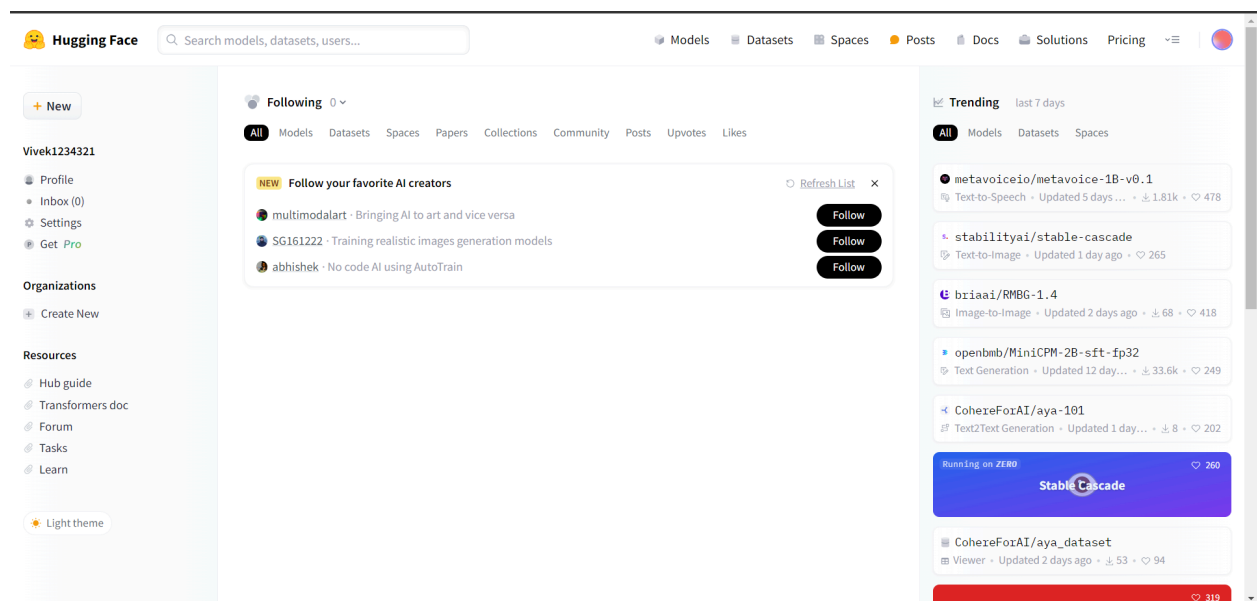
Therefore

Setting Up Hugging Face Account:

Sign-up in the account :

Step 1 : https://huggingface.co/

Once the account is created , Sign in to the account

This is How the Home Page looks :

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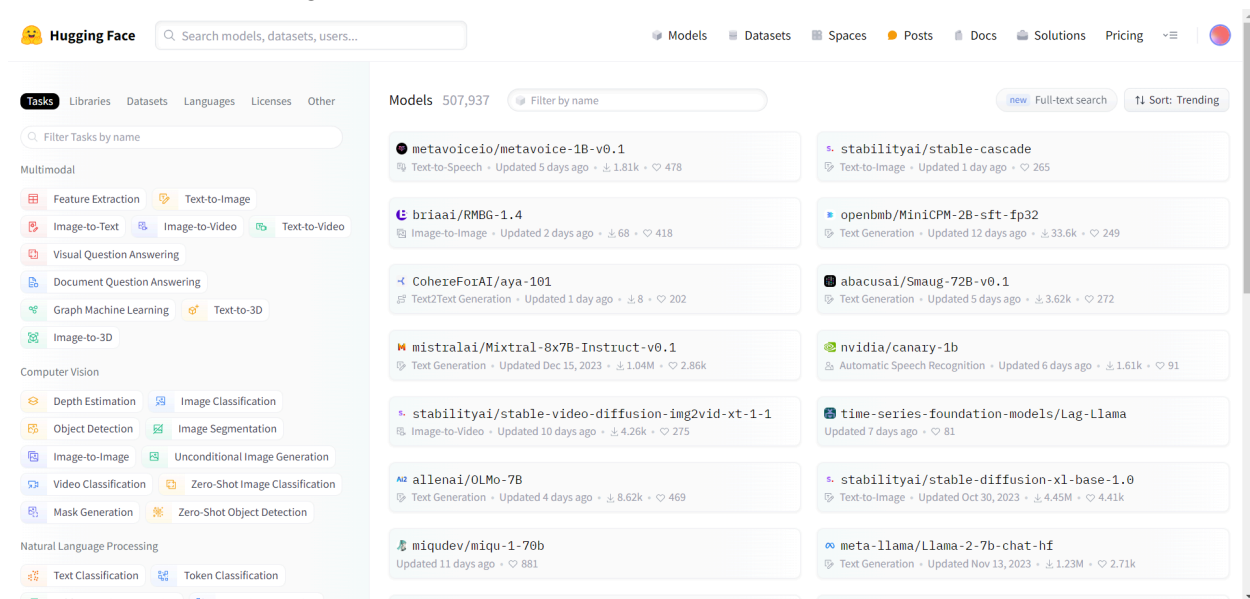Let's Explore Few Sections of hugging face :

1. Models
2. Datasets
3. Spaces

1. Models:
        A Repository Where all the models pushed to the hugging face resides , One can go to the models and search as per the requirements and use it right away
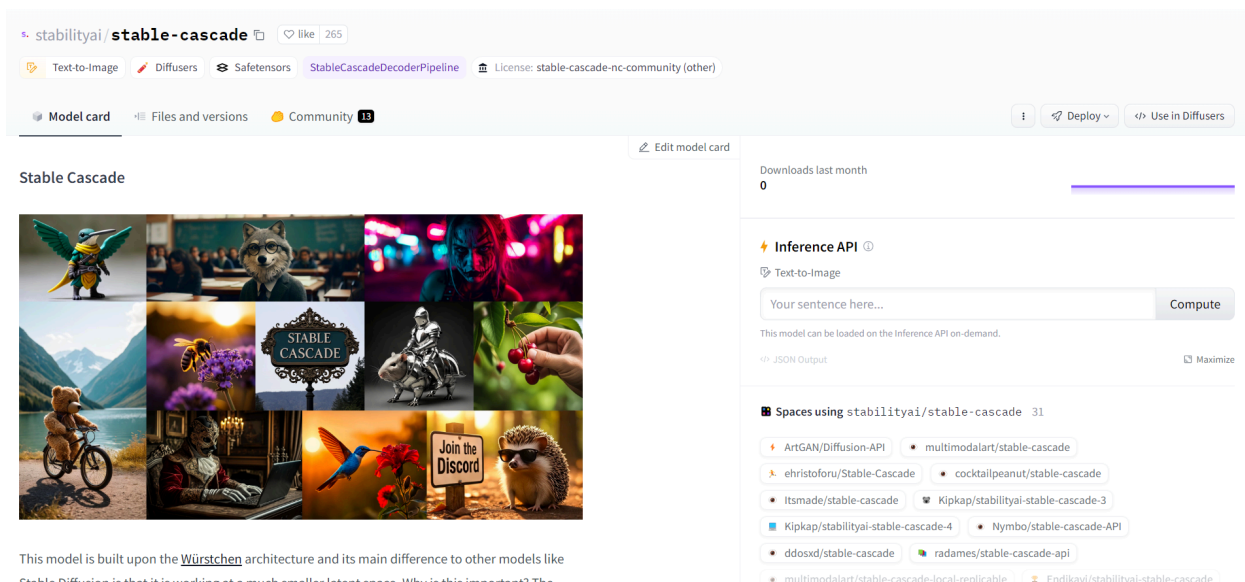
In order to use a particular model , one has to go through the dependencies Required to run the model

This is how a model page would look like :
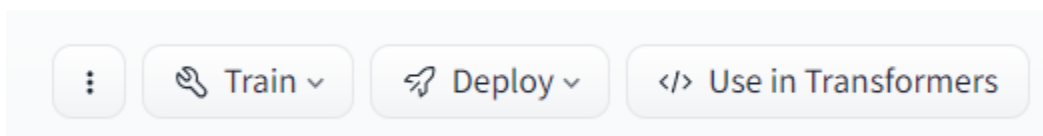

Upon Clicking a model :

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The Description of the Model , Architecture and the Sample code can be found under Model Card

The Files and Versions Contains all the Sharded Model files, This is pulled everytime we run an a transformer

To use the model : Click on the deploy/Transformers tab which is on the Top-Right

After Clicking :

How to use from the ● Transformers ⓘ library   ✕

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

pipe = pipeline("text-generation", model="meta-llama/Llama-2-7b-chat-hf")
```
⧉ Copy

```python
# Load model directly
from transformers import AutoTokenizer, AutoModelForCausalLM

tokenizer = AutoTokenizer.from_pretrained("meta-llama/Llama-2-7b-chat-hf")
model = AutoModelForCausalLM.from_pretrained("meta-llama/Llama-2-7b-chat-hf")
```
⧉ Copy

Quick Links

🔗 Read model documentation

🔗 Read docs on high-level-pipeline

🔗 Read our learning resources

This is the base code to run the LLm model.

2. Datasets :

The dataset page allows the user to Find Datasets for specific Use Case and also allows to filter the datasets

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Spaces : It's a unique way to host and share interactive machine learning (ML) applications directly on the platform.
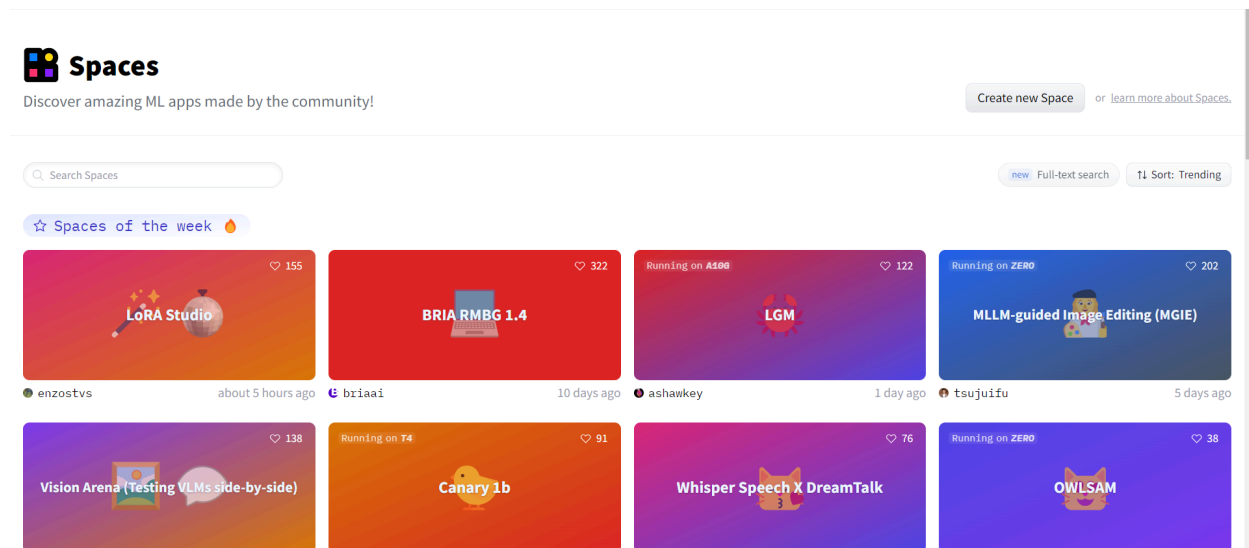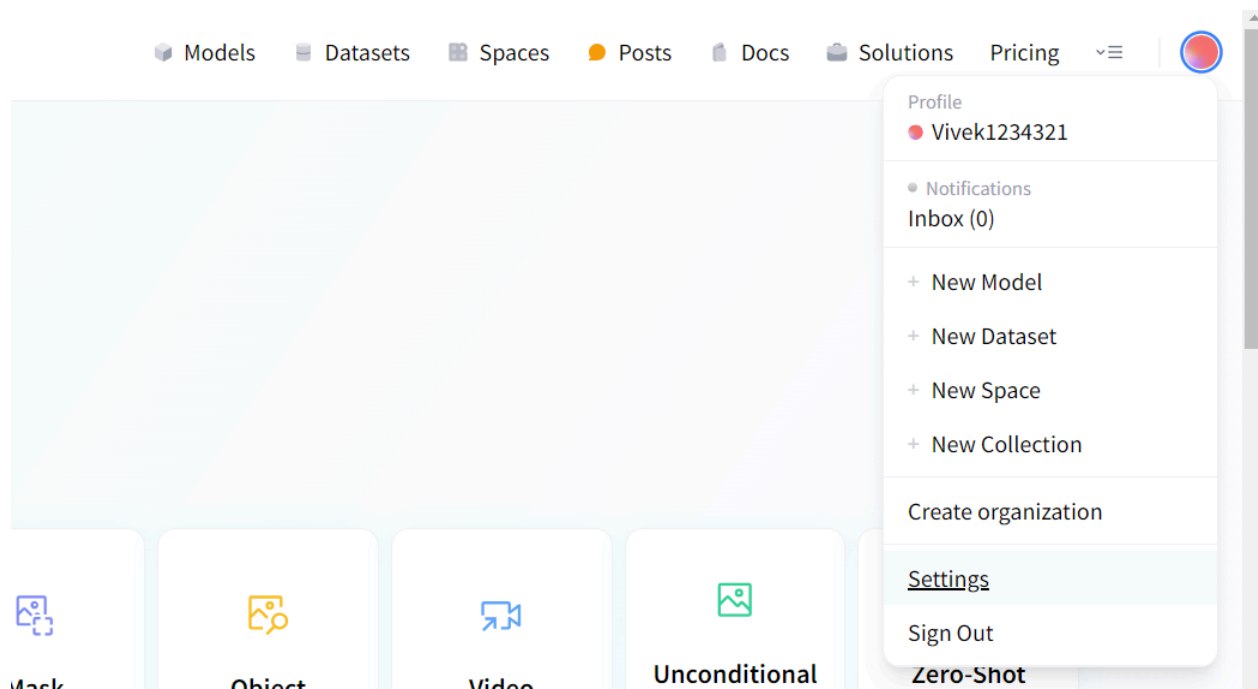

4.Posts

So Let's Now use transformers from Hugging Face , In order to Pull a file from hugging face hub we need a read Api key and likewise to push a file to hugging face hub we need a Write key
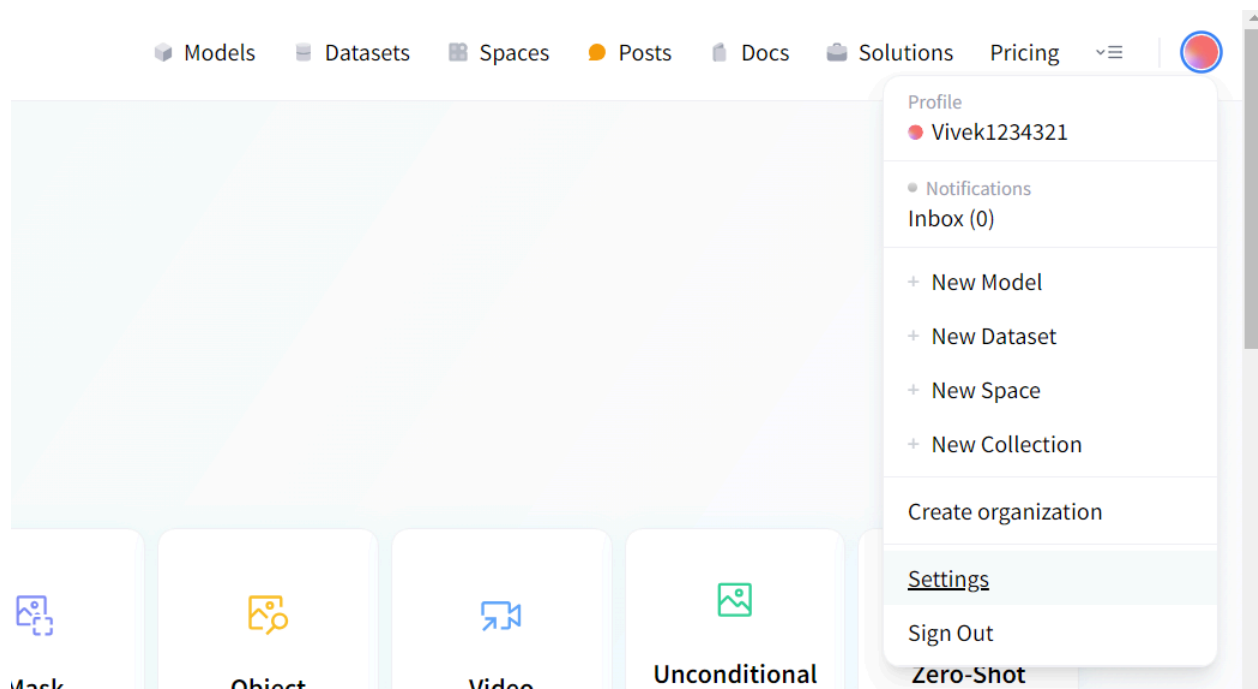
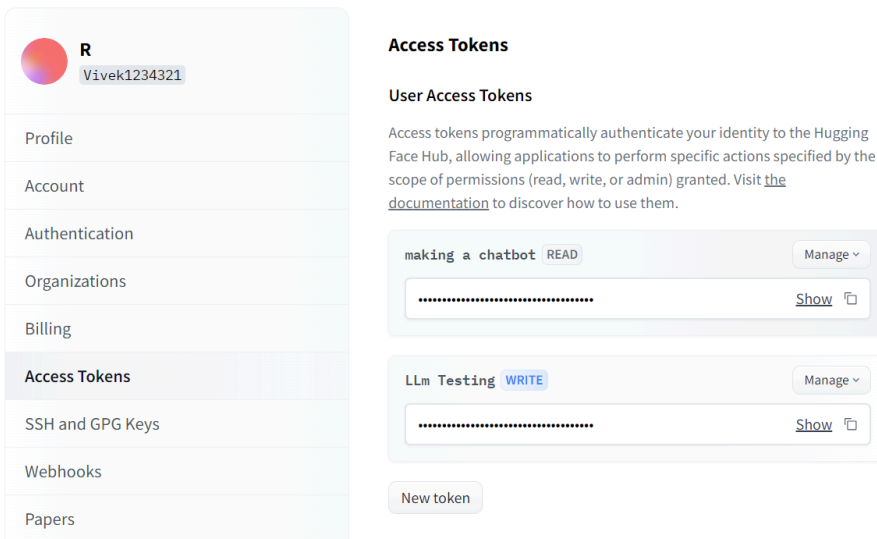Lets now set up Read and Write key

Step-2 :

Click on the setting found the top-right corner of the home page

Click on Access Tokens and then Click New Token

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Create a Read and Write Token Respectively .

Read and Write token is used for authenticating the users to Pull and push the models, Datasets and creating new repositories

Read token:

Offers read-only access to the Hub.
Allows you to:
- Download public and private models you have access to.
- View information about models and datasets.
- Use models for inference (making predictions).
Doesn't allow:
- Uploading new models or datasets.
- Modifying existing resources on the Hub.

Write token:

Grants both read and write access to the Hub.
Includes all the functionalities of a read token, plus:
- Uploading new models and datasets.
- Creating new repositories.
- Modifying existing models, datasets, and repositories you have write access to.
- Pushing changes to private repositories.

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At this point , the users have created a hugging face account , acquired basic understanding about the hugging space and set up Read and Write api token .