

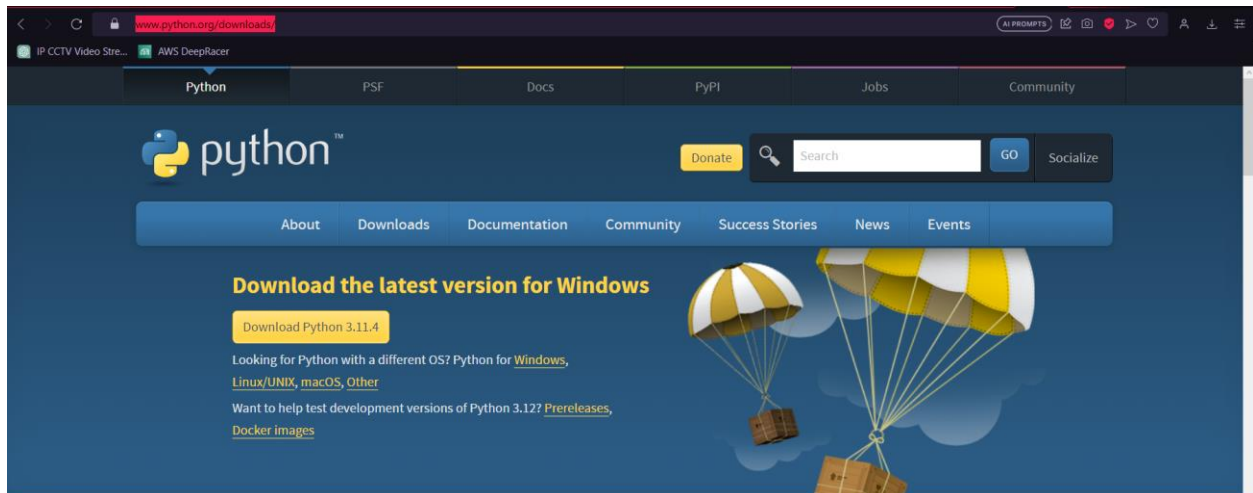
# Program Instruction

Installation Before Using:

- Python 3.11++
- Geforce Experience (Driver Update)
- CUDA & cuDNN
- Microsoft Visual C++
- InfluxDB 2.x & nssm
- Git

Download Python:

1. Go to <https://www.python.org/downloads/>



Click Download to start and wait for it to finish.

1.2 Recommend lower than the latest version for efficiency because latest version might have bug that not fixed. Scroll down to see the version list.

Looking for a specific release?

Python releases by version number:

Release version	Release date		Click for more
<a href="#">Python 3.10.12</a>	June 6, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.11.4</a>	June 6, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.7.17</a>	June 6, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.8.17</a>	June 6, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.9.17</a>	June 6, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.10.11</a>	April 5, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>
<a href="#">Python 3.11.3</a>	April 5, 2023	<a href="#">Download</a>	<a href="#">Release Notes</a>

[View older releases](#)

2 After finish download open it and install python.

python-3.11.3-amd64 6/6/2566 14:16 Application 24,753 KB

Python 3.11.3 (64-bit) Setup

### Advanced Options

- ☐ Install Python 3.11 for all users
- ☒ Associate files with Python (requires the 'py' launcher)
- ☒ Create shortcuts for installed applications
- ☒ Add Python to environment variables
- ☐ Precompile standard library
- ☐ Download debugging symbols
- ☐ Download debug binaries (requires VS 2017 or later)

Customize install location

C:\Users\User\AppData\Local\Programs\Python\Python311 [Browse](#)

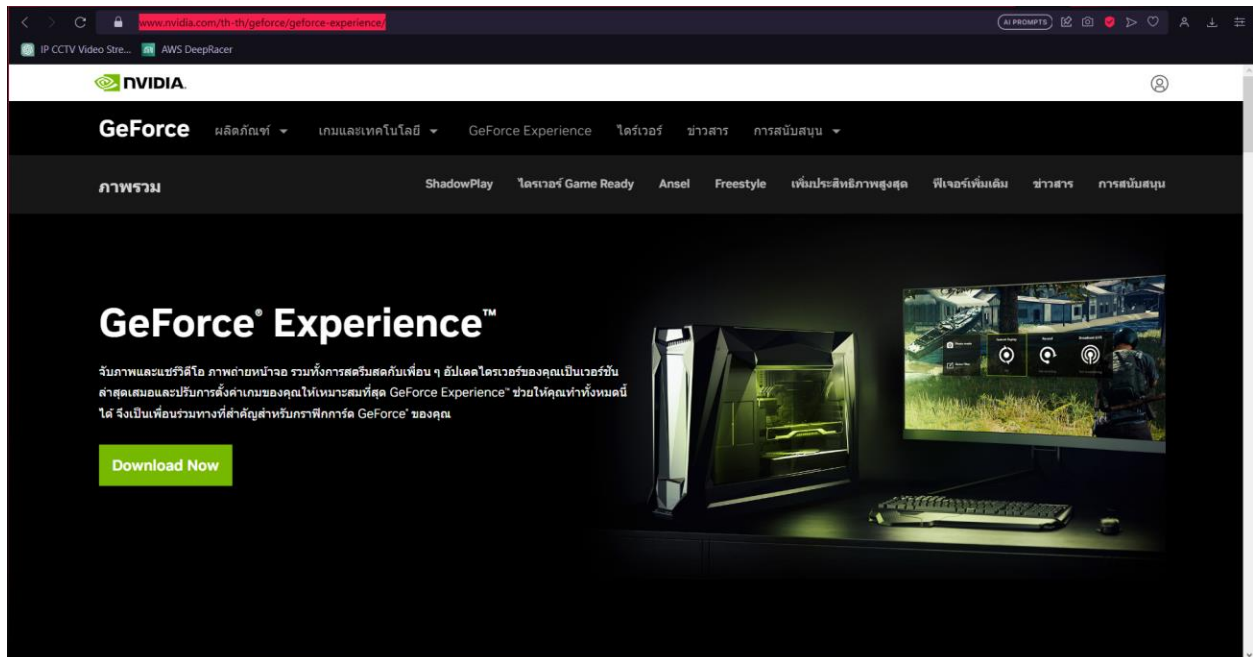
You will require write permissions for the selected location.

[Back](#) [Install](#) [Cancel](#)

**Important!** Must tick Add Python to environment variables box if you don't tick the python will not include the library and you need to go set path by yourself.

2.Download Geforce Experience:

1.Go to <https://www.nvidia.com/th-th/geforce/geforce-experience/>

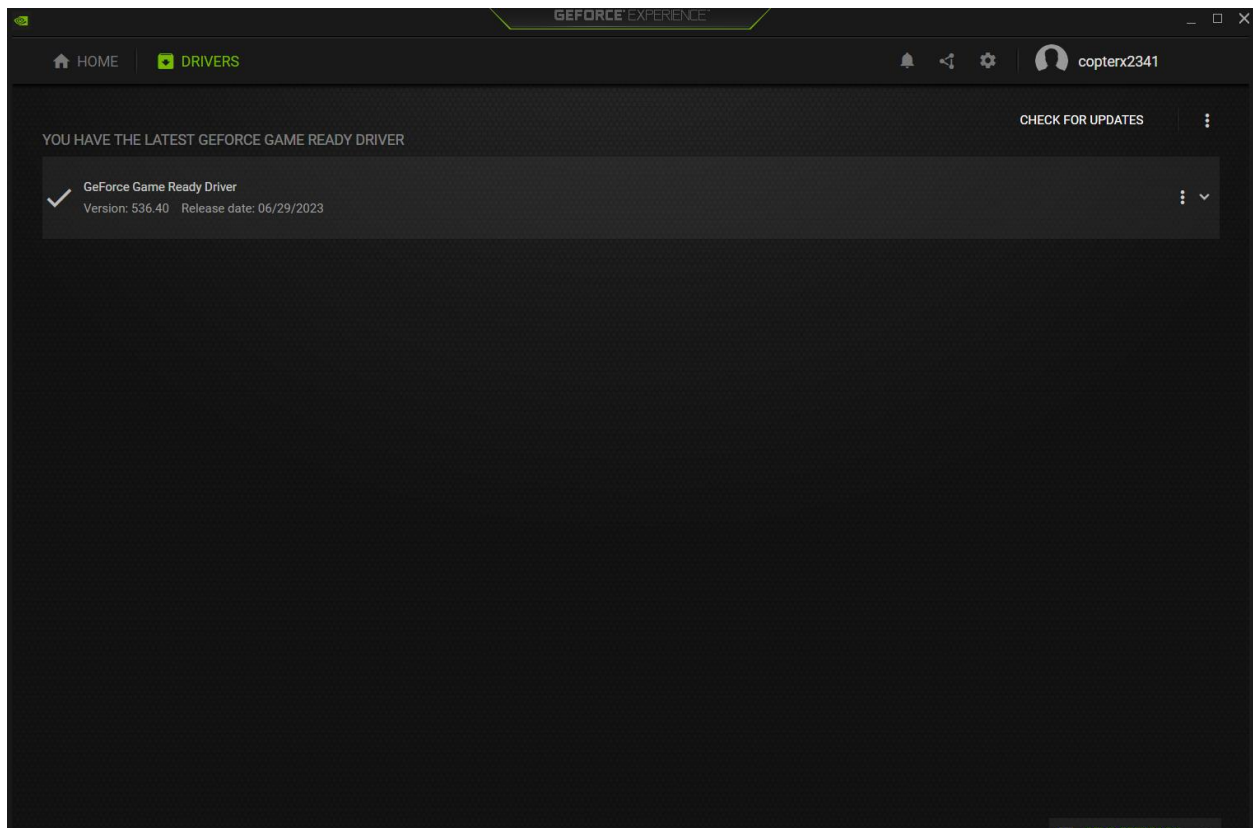


Click Download Now wait for it to download.

 GeForce_Experience_v3.27.0.112	4/3/2566 22:10	Application	128,378 KB
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After finish download install Geforce Experience and open it

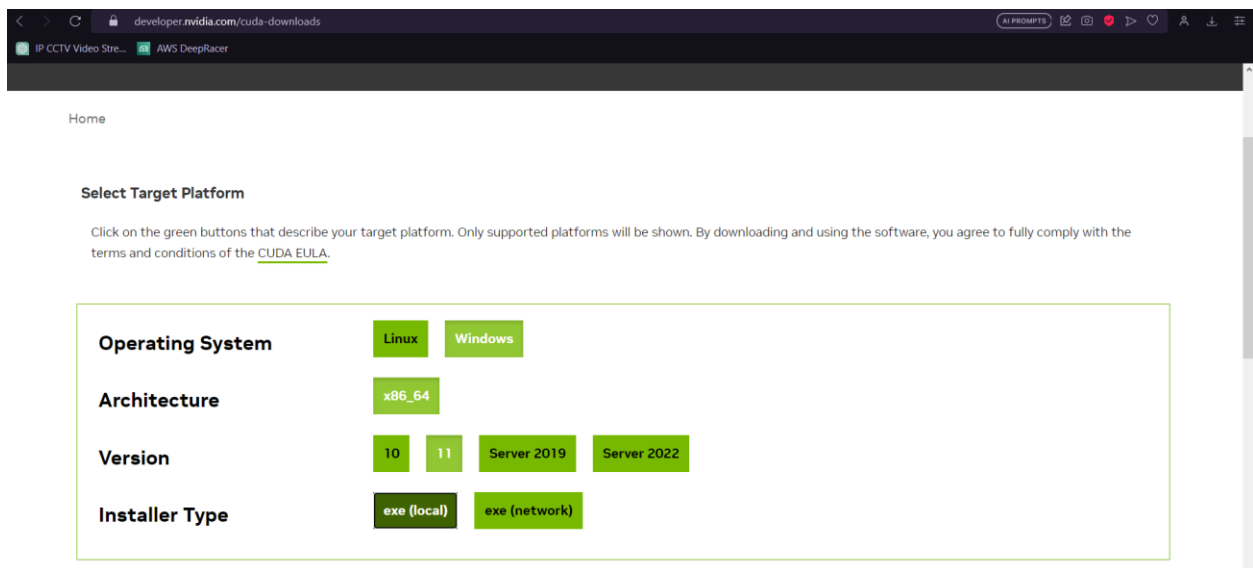
NOTE: This step you must have Account Geforce Experience first.



Check your driver version is your driver are latest version or not, if not install the latest version.

3.Download CUDA & cuDNN :

Go to <https://developer.nvidia.com/cuda-downloads>



Choose according to the appropriate operating system

In Installer Type choice choose local

**Download Installer for Windows 11 x86\_64**

The base installer is available for download below.

Base Installer

Download (3.0 GB)

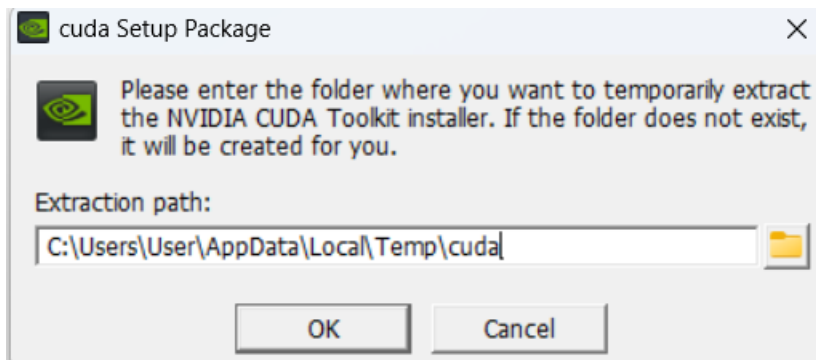
Installation Instructions:

1. Double click cuda\_12.2.0\_536.25\_windows.exe
2. Follow on-screen prompts

The checksums for the installer and patches can be found in [Installer Checksums](#).  
For further information, see the [Installation Guide for Microsoft Windows](#) and the [CUDA Quick Start Guide](#).

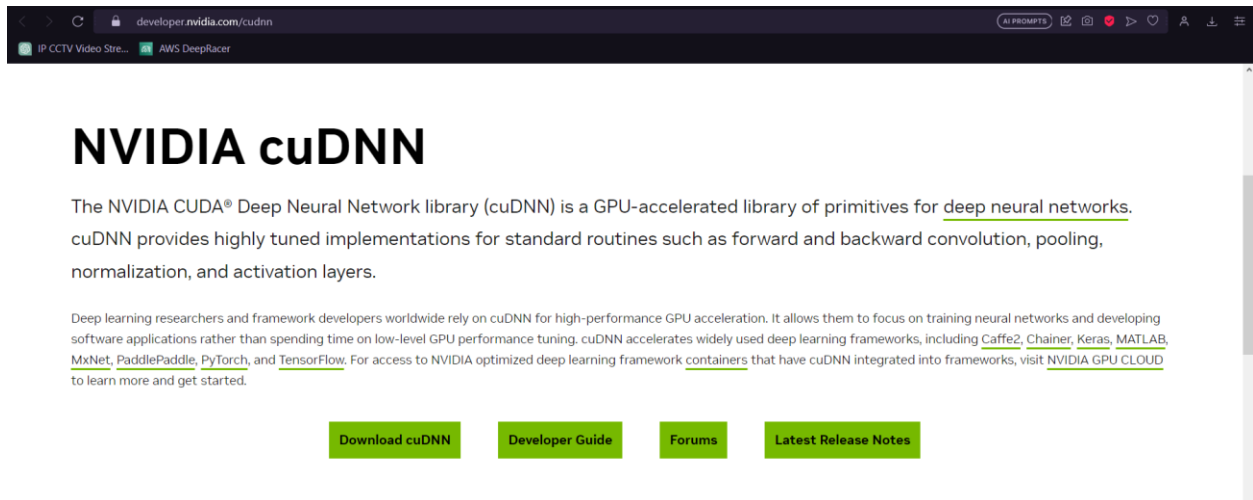
Click download

Wait for program downloaded. After finish open it.

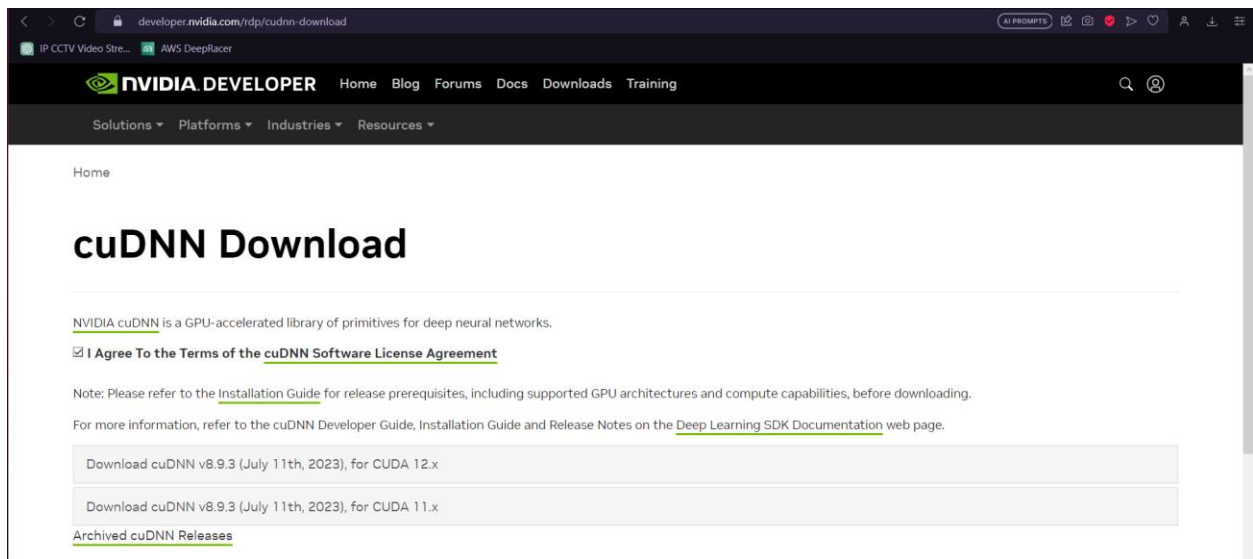


Choose file location I recommend to put it somewhere easy to find but I will leave it as Default

After finish Installation Download cuDNN by this link: <https://developer.nvidia.com/cudnn>

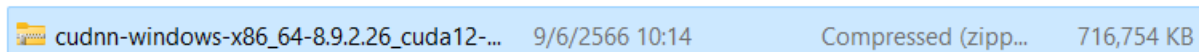


This step you must have Nvidia Account first to download cuDNN.

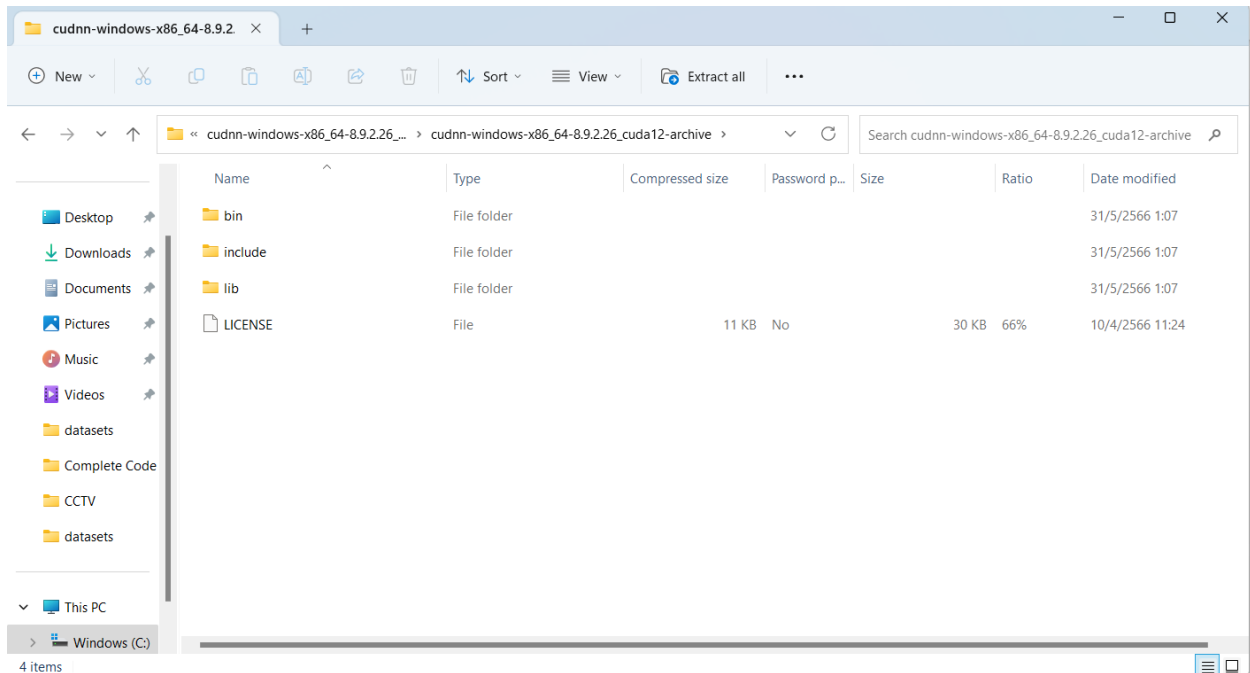


Download cuDNN that match your CUDA version

You will get this file after finish Installation

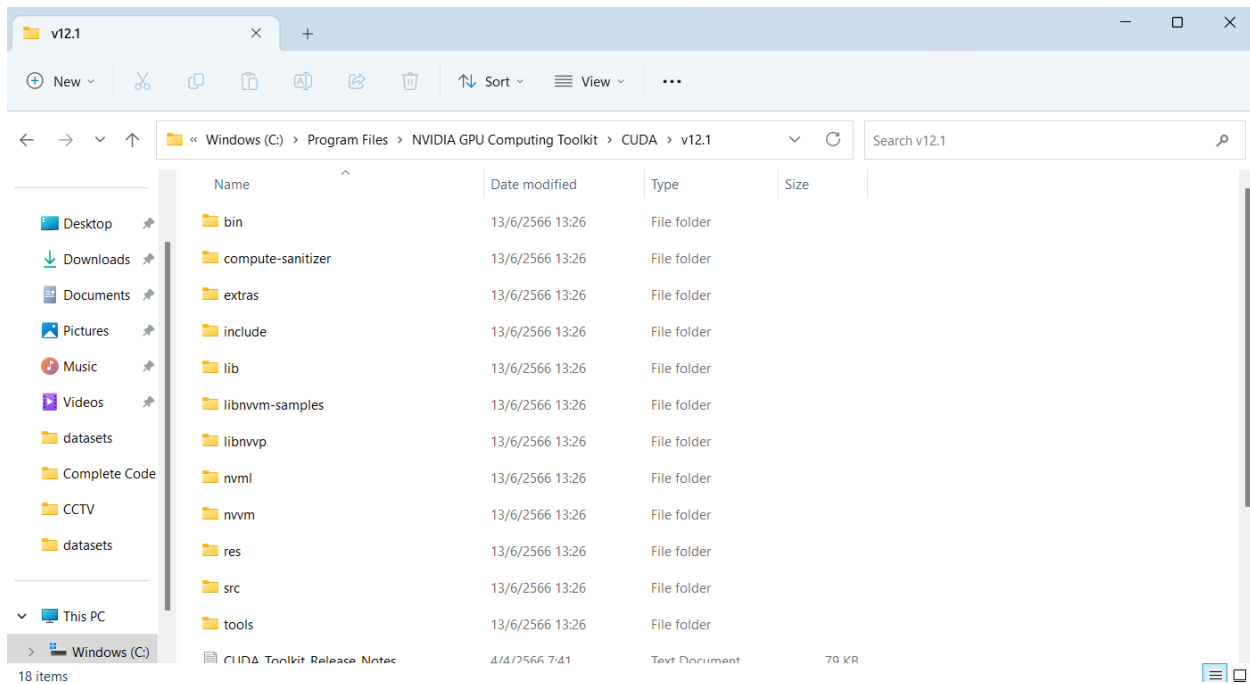


Extract file and open it



Next, open CUDA file location. My CUDA file is

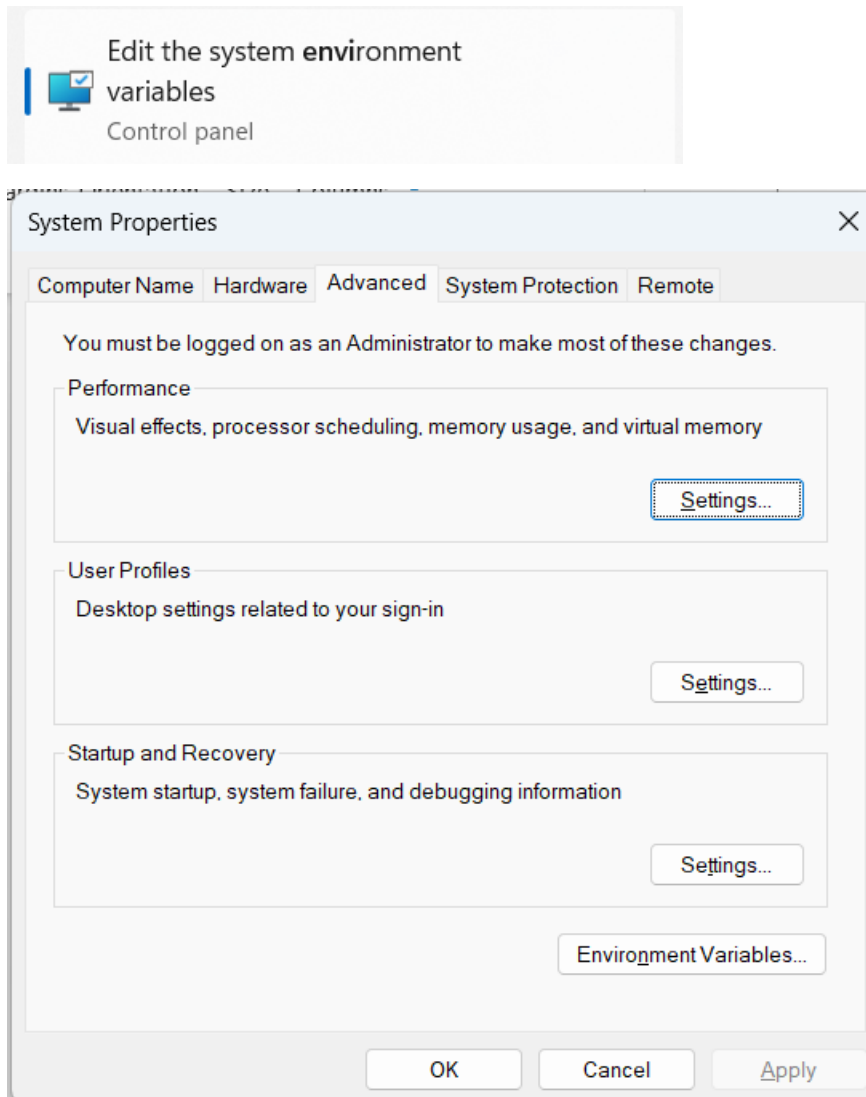
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1



copy file in lib, bin and include from cuDNN Folder to folder lib, bin and include of CUDA folder

After do all step finish now, we will set path to CUDA for the system to know where CUDA is

Write in window search “environment variables”



Click Environment Variables

Check that CUDA path does it exist or not. It will be like this:

CUDA_PATH	C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1
CUDA_PATH_V12_1	C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1

After that, create new system Variable name cuDNN and set path to point to CUDA folder:

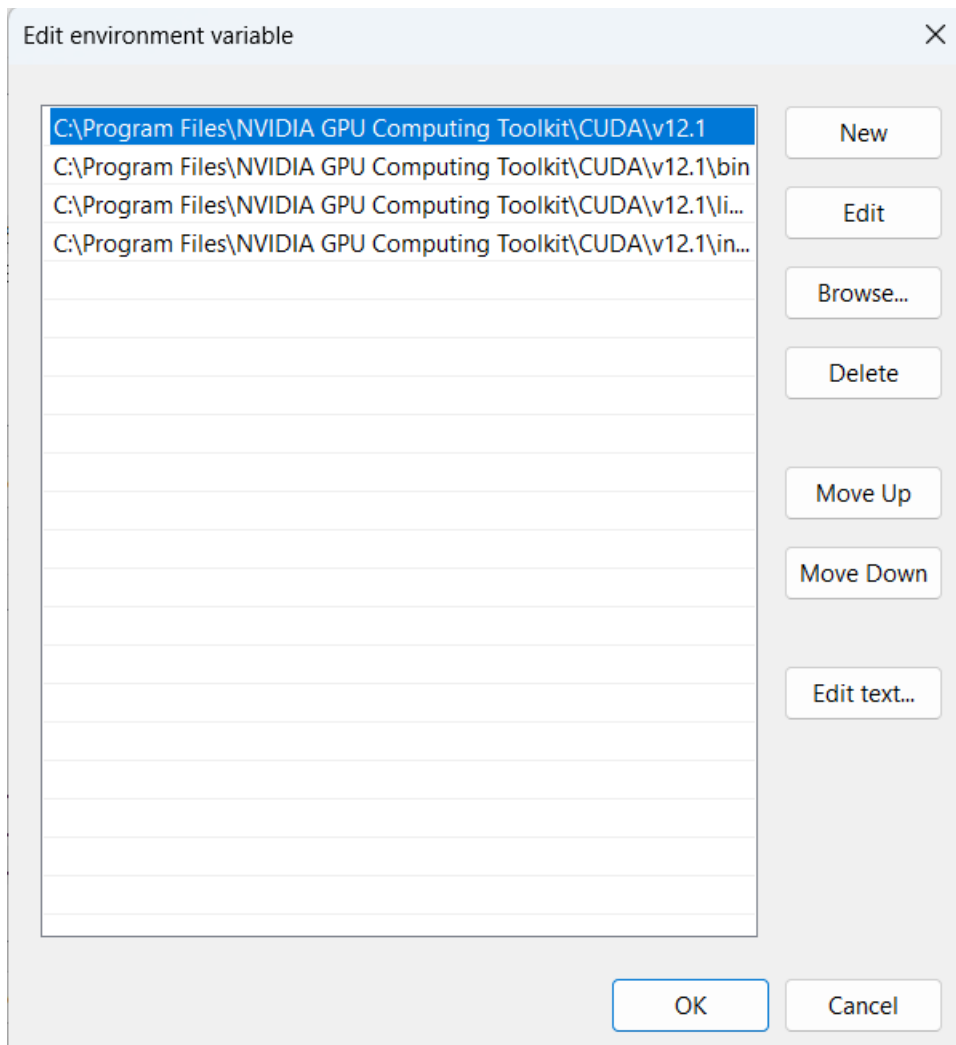
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1



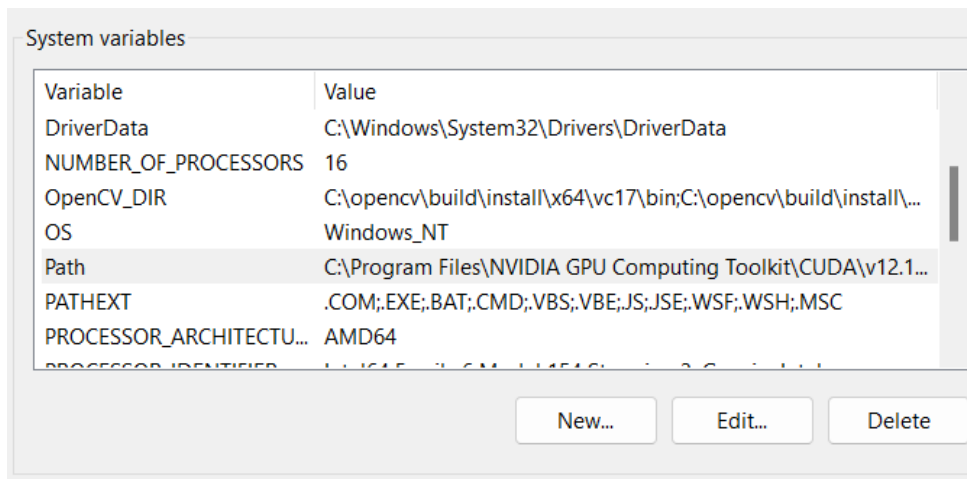
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1\bin

C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1\lib\x64

C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1\include



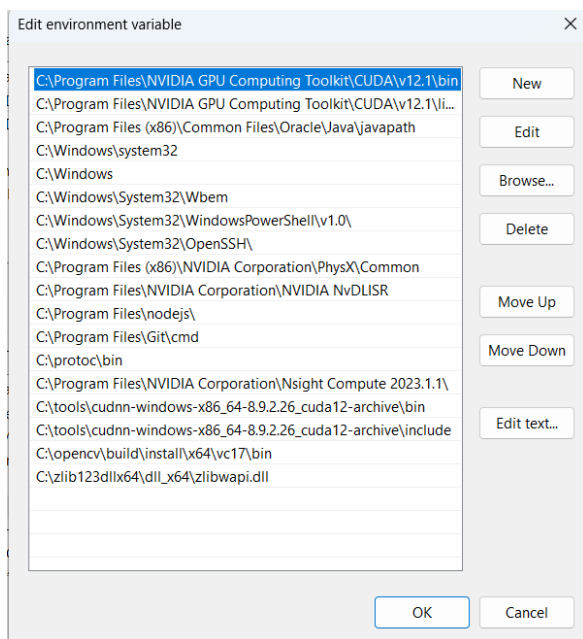
Next, go to Path of System Variable



Click edit and add 2 new locations in path

C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1\libnvvp

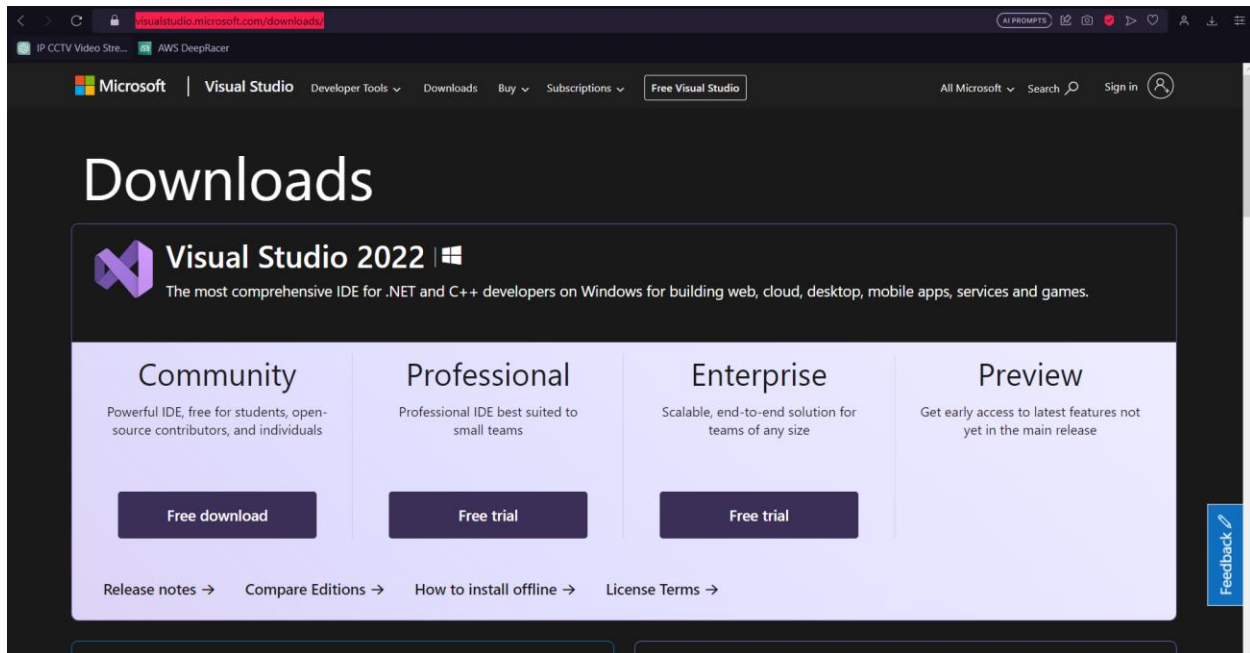
C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.1\bin



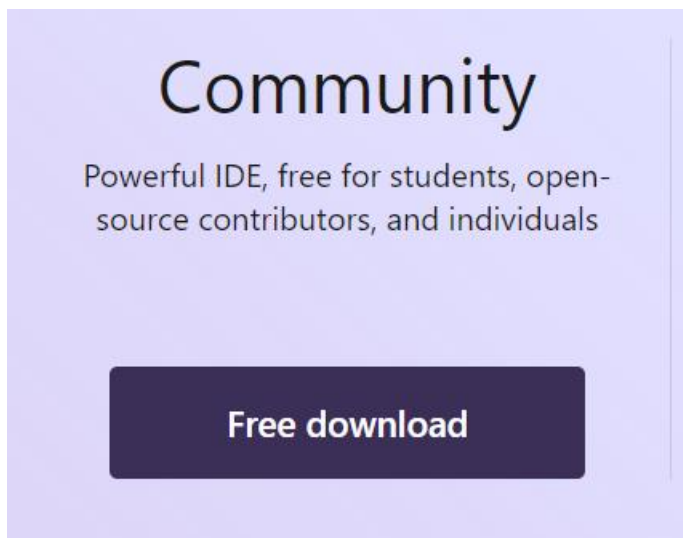
When you finish, you might have to restart computer to make system reboot setting but you can do it after finish all installation.

#### 4. Download Microsoft Visual C++

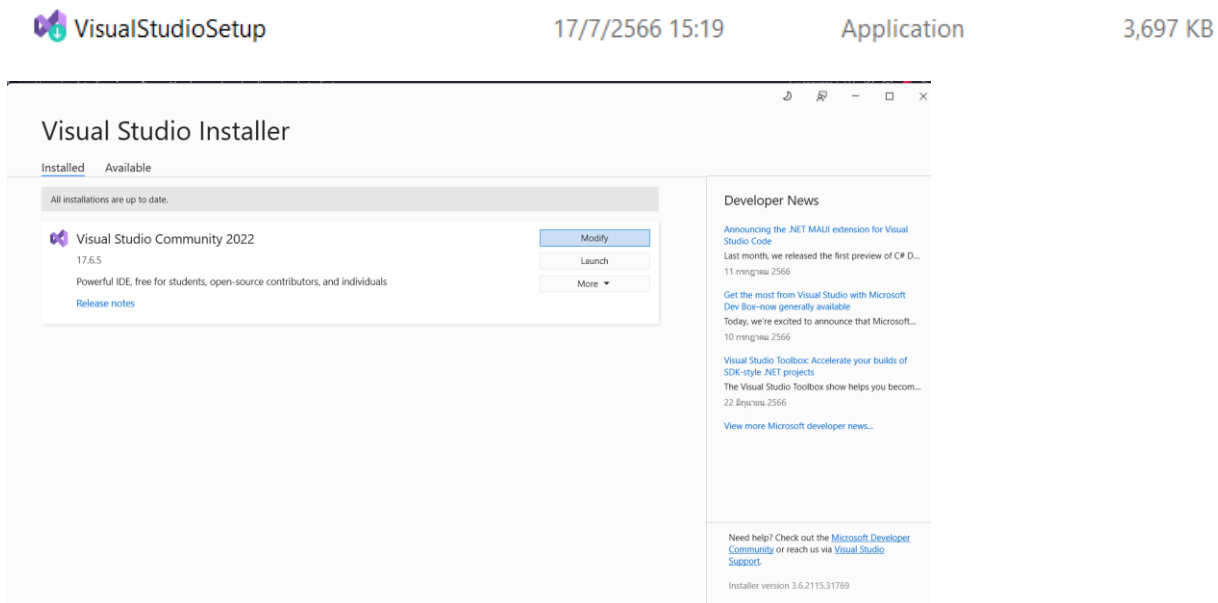
1. Go to <https://visualstudio.microsoft.com/downloads/>



Download the community version



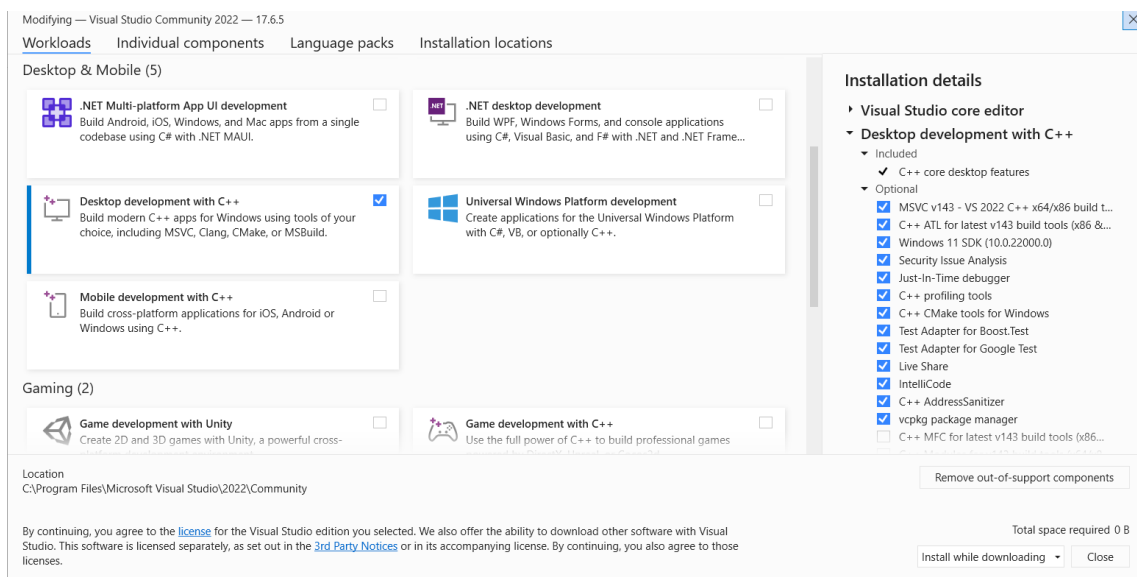
2. After download finish, open installer.



Beside that I have already downloaded so it will show Modify but for who doesn't downloaded it will show install click install.

Choose Desktop development with C++

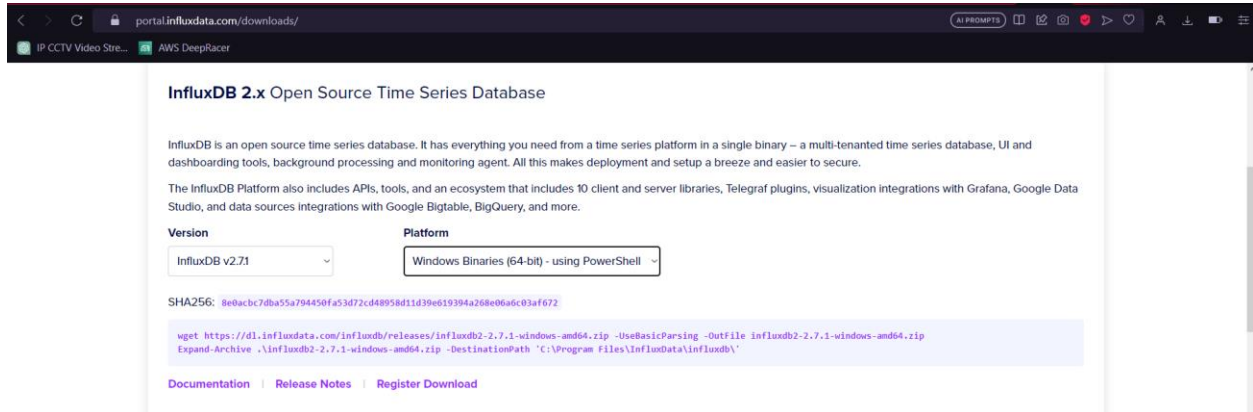
Tick it then untick other than Desktop development with C++ because we not using it




Click Install

## 5. Download InfluxDB 2.x

1. Go to <https://portal.influxdata.com/downloads/>

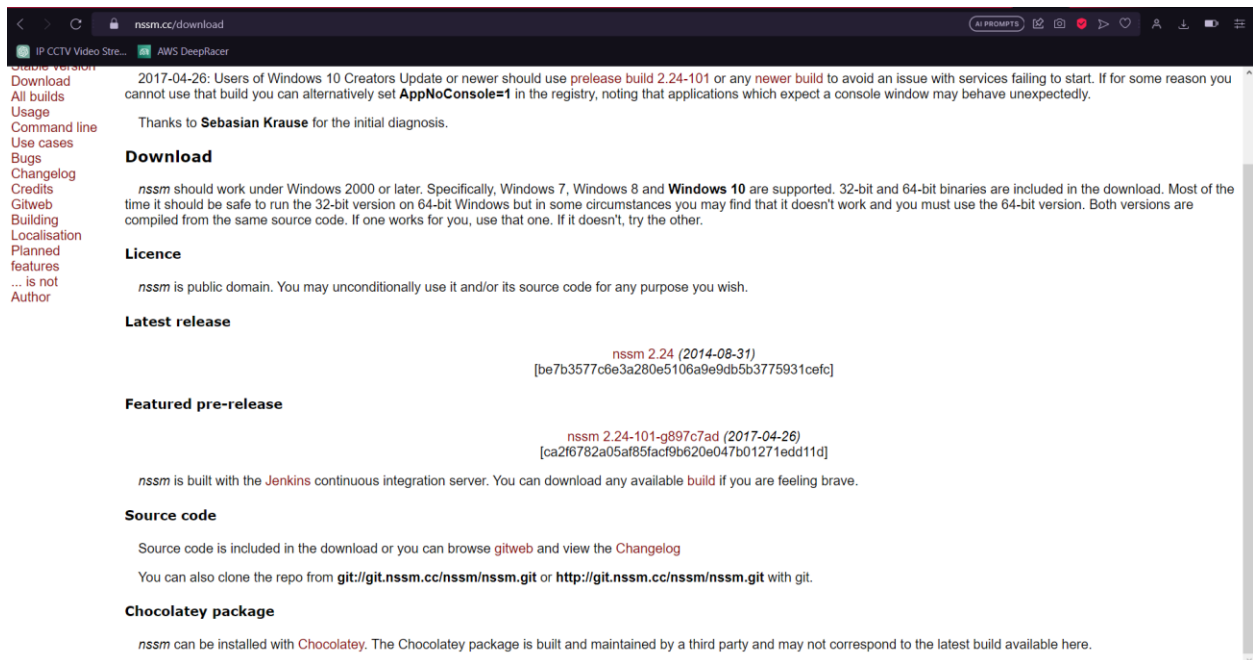



Choose Platform that match your system you must login first before download.

 influxdb2-2.7.1-windows-amd64	2/6/2566 15:08	Compressed (zipp...	43,247 KB
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After finish extract file

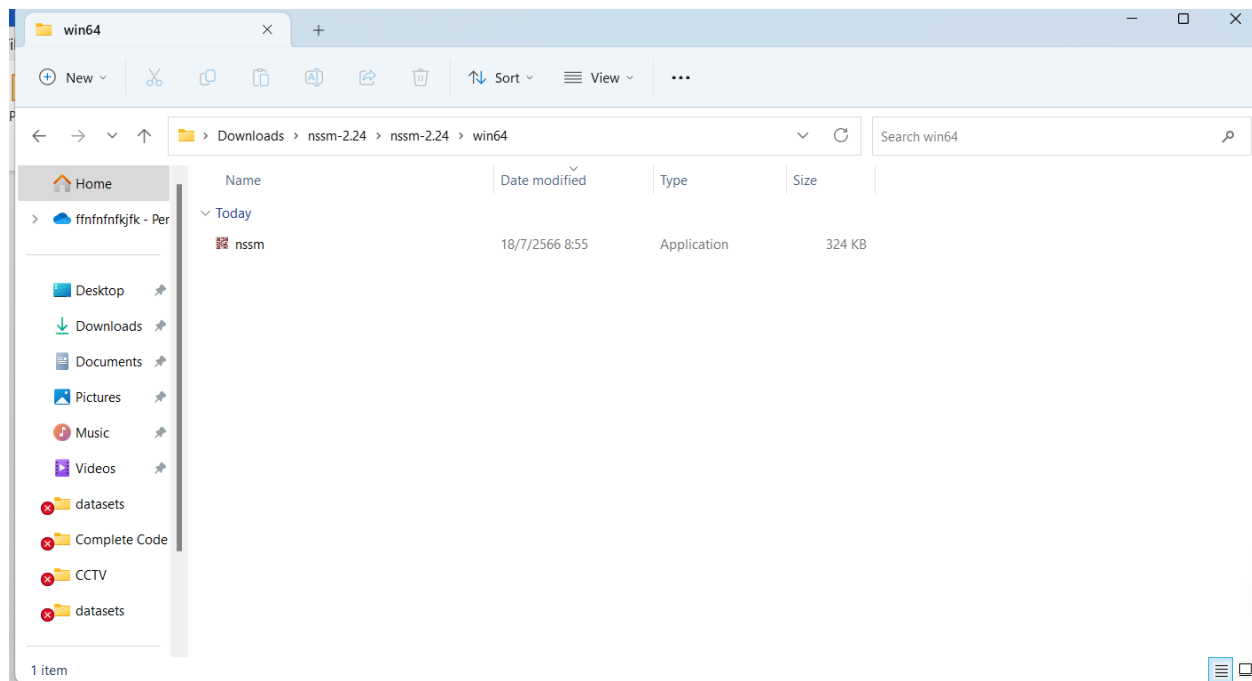
2. Download NSSM follow this link <https://nssm.cc/download>



 nssm-2.24	2/6/2566 15:18	Compressed (zipp...	344 KB
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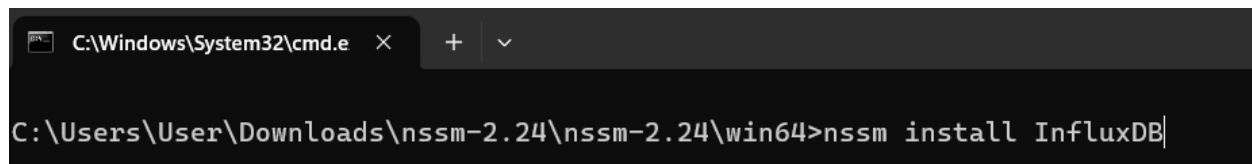
Extract file

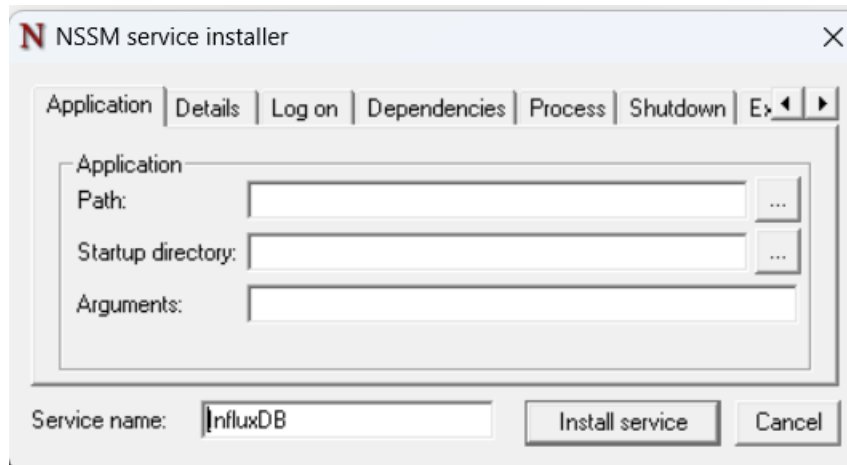
### 3. Open NSSM Folder



You will found nssm.exe open cmd that path point to this folder write command

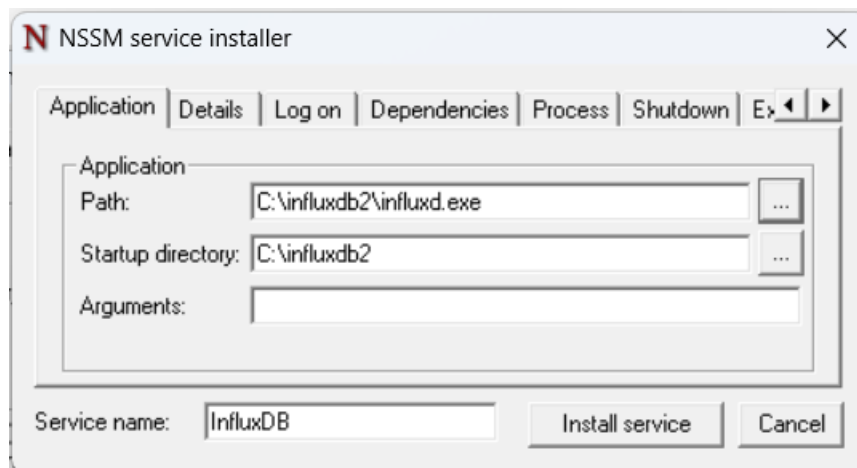
nssm install InfluxDB





Then the program will appear

Choose the path to be the influx.exe in influxdb folder that we extracted



Click install then we will get influxdb server

Task Manager

Search: Type a name, publisher, or PID...

Details

Run new task End task

Name	PID	Status	User name	CPU	Memory (ac...	Architec...	Description
fontdrvhost.exe	1540	Running	UMFD-1	00	3,064 K	x64	Usermode Font Driver ...
grafana-server.exe	9416	Running	SYSTEM	00	1,640 K	x64	grafana-server
grafana.exe	9520	Running	SYSTEM	00	57,356 K	x64	grafana
HxOutlook.exe	21856	Suspended	User	00	0 K	x64	HxOutlook
HxTsr.exe	21952	Suspended	User	00	0 K	x64	HxTsr
influxd.exe	9396	Running	SYSTEM	00	138,932 K	x64	influxd
IntelAudioService.exe	4188	Running	SYSTEM	00	22,616 K	x64	IntelAudioService
IntelCpHDCCSvc.exe	2100	Running	SYSTEM	00	852 K	x64	IntelCpHDCCSvc
ipfsvc.exe	5008	Running	LOCAL SER...	00	2,056 K	x64	ipfsvc
ipf_helper.exe	6700	Running	User	00	1,448 K	x64	Intel(R) Innovation Platf...
ipf_uf.exe	5188	Running	SYSTEM	00	1,364 K	x64	Intel(R) Innovation Platf...
jhi_service.exe	5540	Running	SYSTEM	00	932 K	x64	jhi_service
jusched.exe	14268	Running	User	00	1,092 K	x86	Java Update Scheduler
LocationNotification...	15940	Running	User	00	976 K	x64	Location Notification
LockApp.exe	12340	Running	User	00	33,764 K	x64	LockApp
Lsalso.exe	1100	Running	SYSTEM	00	772 K	x64	Lsalso
lsass.exe	1116	Running	SYSTEM	00	9,392 K	x64	lsass
mongod.exe	4880	Running	NETWORK ...	00	280,480 K	x64	mongod
msedge.exe	912	Running	User	00	42,688 K	x64	Microsoft Edge
msedge.exe	20448	Running	User	00	1,628 K	x64	Microsoft Edge
msedge.exe	3056	Running	User	00	17,472 K	x64	Microsoft Edge
msedge.exe	22512	Running	User	00	7,180 K	x64	Microsoft Edge
msedge.exe	11508	Running	User	00	2,980 K	x64	Microsoft Edge
msedge.exe	1756	Running	User	00	120,828 K	x64	Microsoft Edge

localhost:8086/signin

IP CCTV Video Stre... AWS DeepRacer

AL PROMPTS

influxdb™

Username

Password

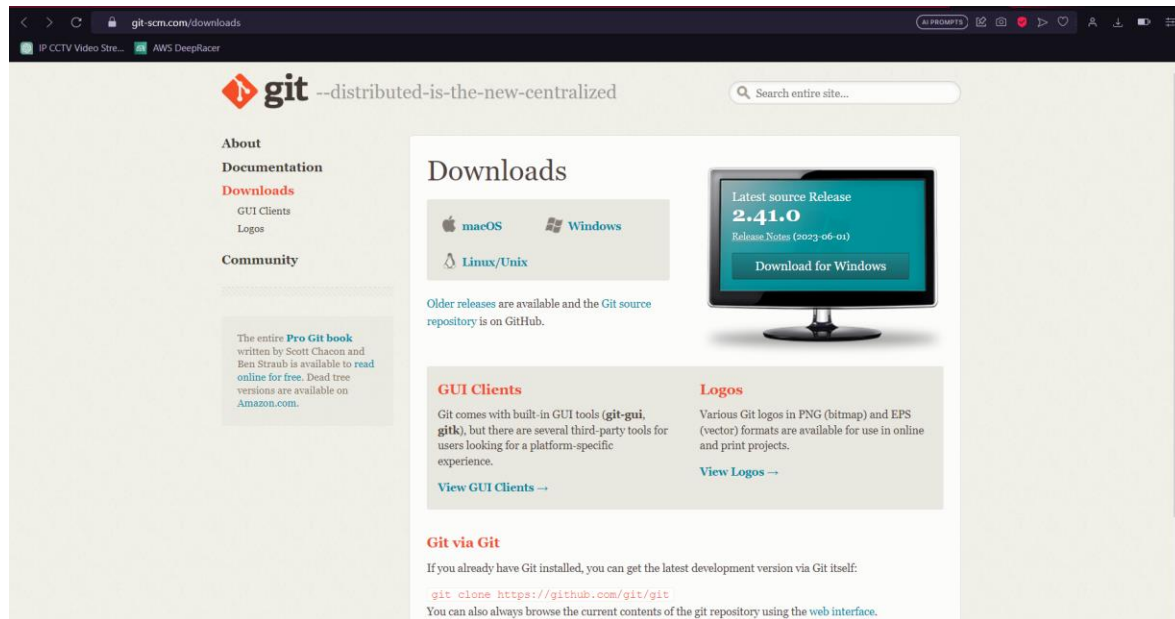
SIGN IN

InfluxDB v2.7.1  
Server: 407fa62  
Frontend: 9d25a2f

Register/login to use InfluxDB

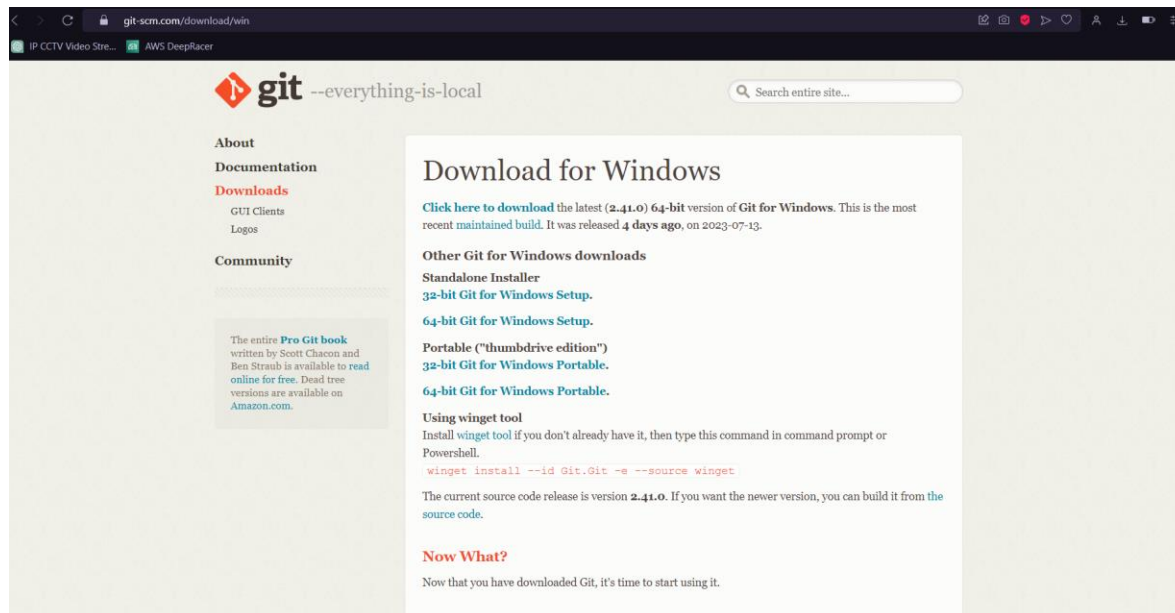


6.Download git (Use to Clone Code from git hub) go to <https://git-scm.com/downloads>




choose platform to download

mine is window



choose Standalone choice

 Git-2.41.0-64-bit	7/6/2566 11:03	Application	59,211 KB
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Follow the steps in installation After installation finish open cmd and write git to check that git installation was success.

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1992]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User>git
usage: git [-v | --version] [-h | --help] [-C <path>] [-c <name>=<value>]
          [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
          [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--bare]
          [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
          [--config-env=<name>=<envvar>] <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
  clone      Clone a repository into a new directory
  init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
  add        Add file contents to the index
  mv         Move or rename a file, a directory, or a symlink
  restore    Restore working tree files
  rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
  bisect     Use binary search to find the commit that introduced a bug
  diff       Show changes between commits, commit and working tree, etc
  grep       Print lines matching a pattern
  log        Show commit logs
  show       Show various types of objects
  status     Show the working tree status
```

Create folder and open cmd that point to the created folder

And clone the repository by using command

git clone <https://github.com/copterx2341/CCTV.git>

```
C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22621.1992]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User\OneDrive\Desktop\Test pull>git clone https://github.com/copterx2341/CCTV.git
Cloning into 'CCTV'...
remote: Enumerating objects: 62, done.
remote: Counting objects: 100% (2/2), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 62 (delta 0), reused 0 (delta 0), pack-reused 60
Receiving objects: 100% (62/62), 16.79 MiB | 2.66 MiB/s, done.
Resolving deltas: 100% (15/15), done.

C:\Users\User\OneDrive\Desktop\Test pull>
```

Enter repository of Folder CCTV by using “cd CCTV”

```
C:\Users\User\OneDrive\Desktop\Test pull>cd CCTV
C:\Users\User\OneDrive\Desktop\Test pull\CCTV>
```

write `pip install -r requirements.txt` to download all the library of python that will be use

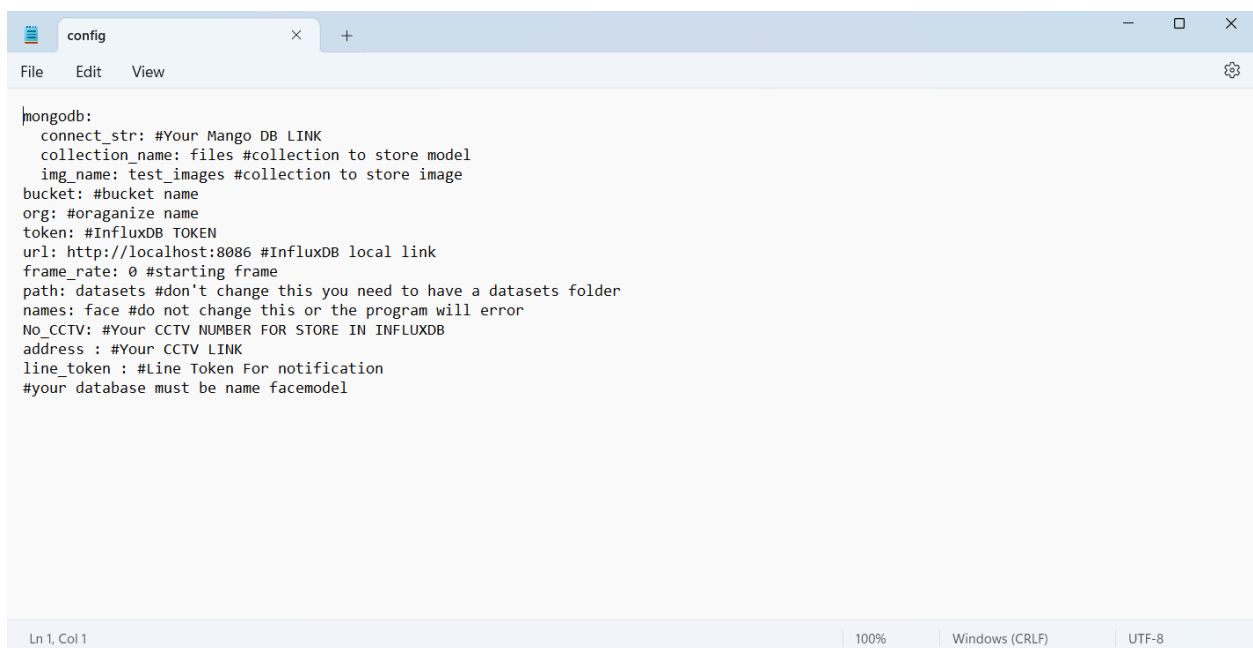
After that,

write `pip3 install torch torchvision torchaudio --index-url https://download.pytorch.org/whl/cu117`

to install TensorFlow wait for the installation finish

open folder CCTV APPLICATION or TRAINING APPLICATION

In the folder we will found `config.yaml` open it recommend to open with editable text file

A screenshot of a text editor window titled 'config'. The editor has a menu bar with 'File', 'Edit', and 'View'. The content of the file is a YAML configuration for MongoDB and InfluxDB. The status bar at the bottom shows 'Ln 1, Col 1', '100%', 'Windows (CRLF)', and 'UTF-8'.

```
mongodb:
  connect_str: #Your Mongo DB LINK
  collection name: files #collection to store model
  img_name: test_images #collection to store image
bucket: #bucket name
org: #oraganize name
token: #InfluxDB TOKEN
url: http://localhost:8086 #InfluxDB local link
frame_rate: 0 #starting frame
path: datasets #don't change this you need to have a datasets folder
names: face #do not change this or the program will error
No_CCTV: #Your CCTV NUMBER FOR STORE IN INFLUXDB
address : #Your CCTV LINK
line_token : #Line Token For notification
#your database must be name facemodel
```

Ok now I will describe each variable what is it do.

`connect_str` is the link that we will use to connect to mongoDB Atlas

`collection-name` is the name of collection that we will use to store face.yml (model) file

`img_name` is the name of collection that we will use to store image of Dataset

`bucket` is the name of the bucket of InfluxDB 2.x

`org` is the organization name of InfluxDB 2.x

token is Token key of InfluxDB 2.x

url: http://localhost:8086 #InfluxDB local link

frame\_rate: 0 #starting frame (this is the starting frame count doesn't effect to a code but need to be int+ only)

path: datasets #don't change it this is the folder that we will collect dataset

names: face #don't change this is the model file name

No\_CCTV is the name of CCTV that you want to name it

address is link that we will use to connect to camera or if you use webcam you can make it 0

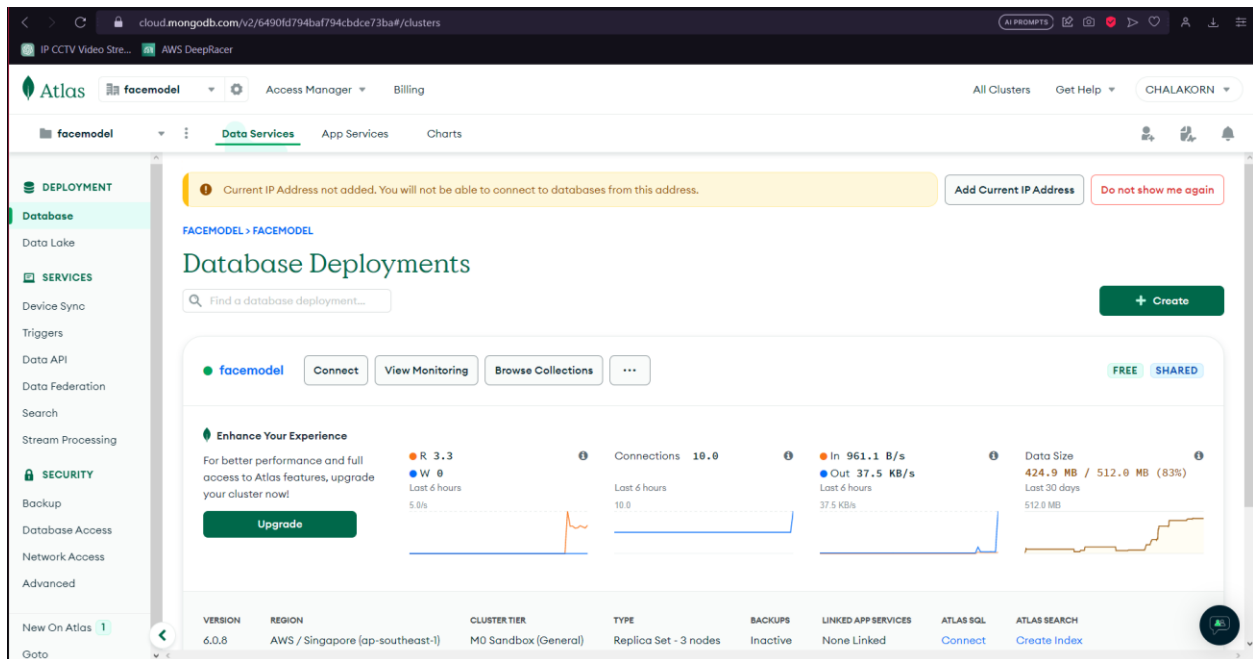
line\_token is line notification Token

beside that, Database must be name facemodel

and in datasets must have at least **1 picture**

OK so we will Setup before we can use it.

1.go to <https://www.mongodb.com/atlas/database> Register/login and create Database name facemodel



After you finish created database go into facemodel database

click connect

# Connect to facemodel

✓

2

3


Set up connection securityChoose a connection methodConnect

! Current IP Address not added. You will not be able to connect to databases from this address.

Add Current IP Address

Do not show me again


## Connect to your application



**Drivers**  
Access your Atlas data using MongoDB's native drivers (e.g. Node.js, Go, etc.)


>

## Access your data through tools




**Compass**  
Explore, modify, and visualize your data with MongoDB's GUI

>



**Shell**  
Quickly add & update data using MongoDB's Javascript command-line interface

>



**MongoDB for VS Code**  
Work with your data in MongoDB directly from your VS Code environment

>

This will popout choose Driver option then copy link in step 3

this is your mongoDB link

### 3. Add your connection string into your application code

☐ View full code sample

```
mongodb+srv://chalakornter:<password>@facemodel.ybtvagw.mongodb.net/?
retryWrites=true&w=majority
```

Replace **<password>** with the password for the **chalakornter** user. Ensure any option params are [URL encoded](#).

password in link you need to change it to the password of the organization

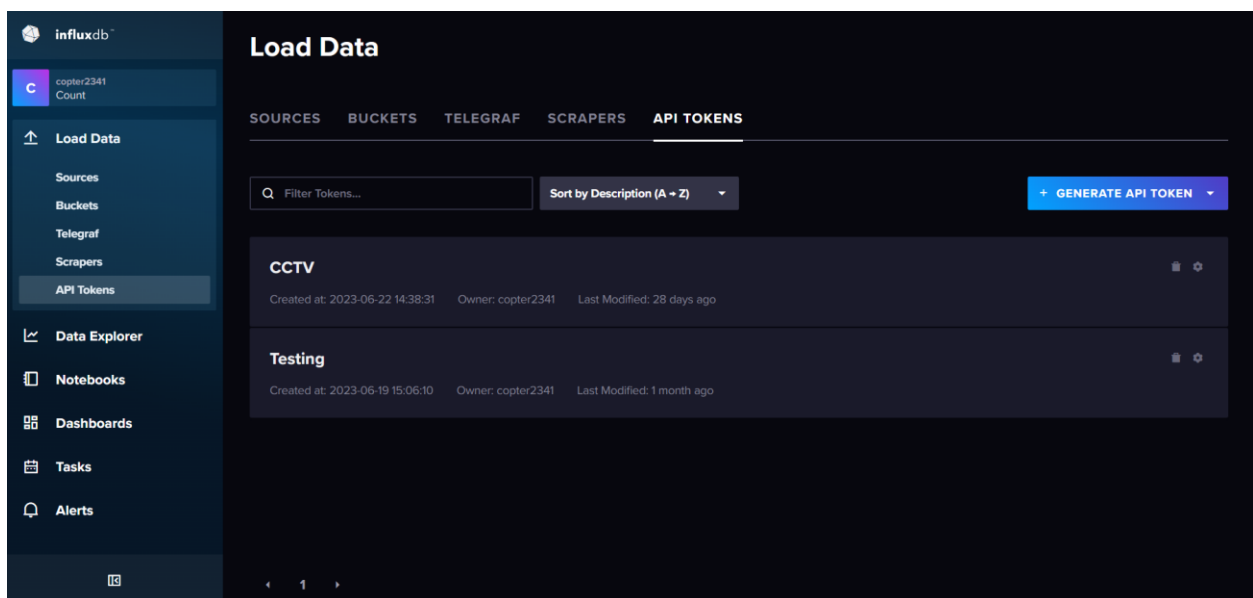
2.go to <http://localhost:8086> and register/login to use influxDB

If you login first time the InfluxDB will request you to Create Organization then Bucket to store the data

1 organization can have many bucket

After finish create go to API tokens to Generate token

As shown below:

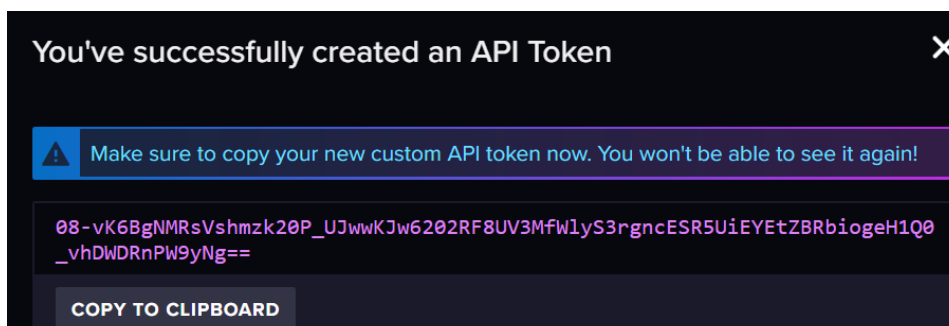


click GENERATE API TOKEN

choose **All Access API Token** option

the system will request the description of the token you can put any description as you like

then if click create you will get the Token



I recommend to save the token to your notepad or text file because your token can be only once time seen so if you close it you can't see it anymore. So be careful don't lose your token if you don't want to create new.

3.go to <https://notify-bot.line.me/th/> to create Line Token

After enter website login to your account After that click My page on your profile

Click Generate Token choose the chat that you want to notify or choose group(I recommend you to create group because you can share with other people)

After we insert all data in config.yaml

open Folder CCTV APPLICATION and TRAINING APPLICATION

CCTV Project > CCTV APPLICATION						CCTV Project > Training APPLICATION					
Name	Status	Date modified	Type	Size		Name	Status	Date modified	Type	Size	
__pycache__		18/7/2566 9:43	File folder			__pycache__		18/7/2566 9:44	File folder		
build	✖	20/7/2566 8:59	File folder			build	✖	20/7/2566 9:03	File folder		
datasets		18/7/2566 10:06	File folder			datasets		18/7/2566 10:01	File folder		
dist	✖	20/7/2566 9:05	File folder			dist	✖	20/7/2566 9:04	File folder		
linePic		18/7/2566 10:02	File folder			AfterRename		17/7/2566 13:37	Python Source File	1 KB	
templates		18/7/2566 9:43	File folder			config		18/7/2566 10:01	Yaml Source File	1 KB	
app		11/7/2566 11:58	Python Source File	2 KB		countpeople		29/6/2566 16:13	Python Source File	3 KB	
app.spec		20/7/2566 8:59	SPEC File	1 KB		downloadfiles		17/7/2566 13:38	Python Source File	1 KB	
cctv		4/7/2566 14:09	ICO File	4 KB		face		18/7/2566 10:01	Yaml Source File	80 KB	
config		18/7/2566 9:57	Yaml Source File	1 KB		Face_detect		5/7/2566 9:22	Python Source File	15 KB	
countpeople		17/7/2566 13:07	Python Source File	3 KB		face-training		20/7/2566 9:02	ICO File	22 KB	
face		18/7/2566 10:01	Yaml Source File	80 KB		MongoDB_client		17/7/2566 13:18	Python Source File	10 KB	
Face_detect		6/7/2566 15:04	Python Source File	18 KB		training		11/7/2566 13:25	Python Source File	3 KB	
influxwrite		28/6/2566 16:00	Python Source File	1 KB		training.spec		20/7/2566 9:03	SPEC File	1 KB	
MongoDB_client		17/7/2566 11:21	Python Source File	9 KB		trainingmodel		18/7/2566 10:01	Python Source File	4 KB	
trainingmodel		5/7/2566 14:04	Python Source File	4 KB		yolov8n-face.pt		15/6/2566 9:31	PT File	6,104 KB	
yolo_video		17/7/2566 13:30	Python Source File	12 KB							
yolov8n-face.pt		15/6/2566 9:31	PT File	6,104 KB							

In CCTV APPLICATION we will use app.py to run the program – CCTV camera program detect people.

TRAINING APPLICATION use training.py to run program – Use to train face model.