**Fast Api step by step**

**Cài đặt Fast Api**

pip install fastapi

**Cài đặt Uvicorn**

pip install uvicorn

Nếu lỗi: pip install uvicorn --user

**Tạo api đầu tiên:**

Tạo file main.py

# main.py

from fastapi import FastAPI

app = FastAPI()

@app.get("/")

def read\_root():

    return {"Kiet": "Dep trai"}

**Run api:**

uvicorn main:app –reload

Nếu lỗi: python -m uvicorn main:app --reload

pip install -U pip virtualenv

nếu lỗi: pip install --user -U pip virtualenv

pip install tensorflow

nếu lỗi: pip install --user -U install tensorflow

pip install tensorflow –user  
from fastapi import FastAPI, UploadFile, File

import numpy as np

import tensorflow as tf

from tensorflow.keras.preprocessing import image

from tensorflow.keras.optimizers import Adam

# optimizer = Adam(learning\_rate=1e-4, decay=1e-6)

# Load model

model\_path = 'model\\vgg19-model-new.h5'

model = tf.keras.models.load\_model(model\_path)

@app.post("/predict/")

async def predict\_tumor(file: UploadFile = File(...)):

    # Read and preprocess the image

    img = image.load\_img(file.file, target\_size=(224, 224))

    x = image.img\_to\_array(img) / 255

    x = np.expand\_dims(x, axis=0)

    # Predict the class

    classes = model.predict(x, batch\_size=10)

    predicted\_class = np.argmax(classes[0])

    # Map predicted class to tumor type

    tumor\_types = ['Glioma', 'Meningioma', 'No tumor', 'Pituitary']

    predicted\_tumor\_type = tumor\_types[predicted\_class]

    return {"file\_name": file.filename, "predicted\_tumor\_type": predicted\_tumor\_type}