README.txt

After downloading the files from github or using git clone please ensure your directory structure looks like this

Directory Structure:-

main\_folder

|

| —------- app.py

|

| —------- best\_model.pt

|

| —------- frontend.py

|

| —------- image\_classification.ipynb

|

| —------- Image\_Classification\_Report.docx

|

| —------- inference.py

|

| —------- README.txt

On windows please use command prompt

It is recommended to create a new virtual environment

python -m venv image\_classification (Windows)

python3 -m venv image\_classification ( MacOS, linux)

image\_classification\Scripts\activate (Windows)

source image\_classification/bin/activate (MacOS, linux)

Libraries required for image\_classification:

torch torchvision fastapi uvicorn matplotlib python-multipart streamlit

pip install torch torchvision fastapi uvicorn matplotlib python-multipart streamlit

**For Training (optional):**

The training code is provided in the image\_classification.ipynb. On running this file the dataset will be installed in the main\_folder, also the trained model will be saved in a new directory named models in the main\_folder as well.

In order to use the trained\_model.pt, please edit the model\_path variable in inference.py mentioned here

model\_path = os.path.join( main\_folder, 'best\_model.pt' )

After training the directory structure should look like this

main\_folder

|

| —------- image\_classification.ipynb

|

| —------- frontend.py

|

| —------- app.py

|

| —------- best\_model.pt

|

| —------- README.txt

|

| —------- cifar10

| |

| | —------ train

| |

| | —------ test

|

| —------- models

| |

| | —------- trained\_model.pt

**For inference:**

Run the FastAPI from your terminal

uvicorn app:app --reload

Open another instance of command prompt, and enter the main\_folder by changing directory appropriately.

Now activate the virtual environment using

image\_classification\Scripts\activate (Windows)

source image\_classification/bin/activate (MacOS, linux)

Run the streamlit frontend on your localhost using the command

streamlit run frontend.py

The streamlit frontend will open in the browser, please upload either a ‘png’, ‘jpg’ or a ‘jpeg’ file by clicking on the Browse files button.