How to install the OVision tool

Applications needed: python3, python3-pip, Flask, keras, tensorflow, scikit-image, matplotlib, telnet (if any of these are already on your device, you can skip that install)

Italic means actual linux/terminal/pi commands

Check the version of python3 installed
python3 --version

If python3 is not installed
apt-get update
apt-get install python3

Install python3-pip
apt install python3-pip
pip3 install Flask
pip3 install keras
pip3 install tensorflow
pip3 install scikit-image
pip3 install matplotlib
sudo apt-get -qq -y install telnet

Download the OVision SW zip file and unzip [Please share only with anyone on this project]
https://drive.google.com/file/d/1KqxchgRascPEFCYgYZROv4d3fC8X3HTp/view?usp=sharing

It will create 3 directories.
images/   install_packages_for_pi_nn/   model/
cd model
If all tools are installed, you can run this -

To run
sudo python3 image_classify_new.py

You will see similar logs on-screen - for example.

Loading model
2022-08-12 14:09:33.463894: I tensorflow/compiler/mlir/mlir_graph_optimization_pass.cc:354]
MLIR V1 optimization pass is not enabled
2022-08-12 14:09:34.428558: W tensorflow/core/framework/cpu_allocator_impl.cc:82]
Allocation of 102760448 exceeds 10% of free system memory.
2022-08-12 14:09:34.428665: W tensorflow/core/framework/cpu_allocator_impl.cc:82]
Allocation of 102760448 exceeds 10% of free system memory.

2022-08-12 14:09:35.453670: W tensorflow/core/framework/cpu_allocator_impl.cc:82] Allocation of 9437184 exceeds 10% of free system memory.
2022-08-12 14:09:36.143435: W tensorflow/core/framework/cpu_allocator_impl.cc:82] Allocation of 9437184 exceeds 10% of free system memory.
2022-08-12 14:09:36.833540: W tensorflow/core/framework/cpu_allocator_impl.cc:82] Allocation of 9437184 exceeds 10% of free system memory.
 * Serving Flask app "image_classify_new" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.

   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://0.0.0.0:80/ (Press CTRL+C to quit)

Do not CTRL+C, it will quit the application, keep this running. Then use browser to run OVision locally [intranet]
http://0.0.0.0:80/

You should get something like this ->
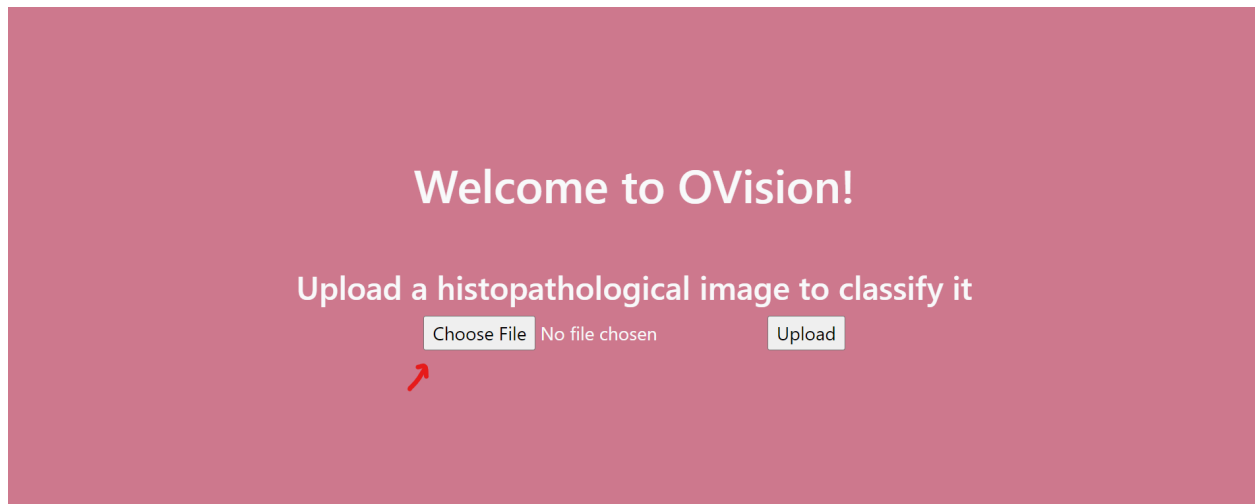
Click Choose file. Go to images/mc/
Pick any file, double click
Then click upload.
It should show results

Ovision Classifier Results

My algorithm gave this prediction: MC

Rank	Ovarian Cancer Type	Probability
Most Likely:	MC	0.9998915
2nd Most Likely:	SC	0.000105628314
3rd Most Likely:	EC	2.9122914e-06

Try again?

To run through the internet get the inet address
ifconfig
To find the inet, example "inet 192.168.1.219"

Then
http://192.168.1.219:80

You can repeat the classification above.

Once you prove that everything is working, for permanent installation =>
sudo nohup python3 image_classify_new.py > log.txt 2>&1

As long as the server is up, you can exit from the terminal, this will keep running.

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