Supplementary Material for IMVIP Submission 22

As supplementary material we provide the zip file **DFNet.zip**

It includes: - **Documentation:** README.md (this file) - **Models:** The DF-Net comprising the sub-models M1 and M2 (in TensorFlow format) - **Docker-Image:** Dockerfile and code to create an independent docker container to easily test the DF-Net and reproduce results on the benchmark dataset - **Jupyter Notebook:** Interactive way to test DF-Net and visualize examples - **Testdata:** Copy of the benchmark dataset CASIA (due to space restrictions only a subset of the CASIA V1 benchmark dataset is used)

HowTo: Test DF-Net in Docker container

Download und extract the file **DFNet.zip** to an environment supporting Docker, ideally in a Linux-based system with GPU support ($ = command prompt):

Install zip tool (if not already available):

```
$ sudo apt install zip
```

Unpack zip:

```
$ unzip DFNet.zip
```

Change Directory:

```
$ cd IMVIP_Supplementary_Material
```

BUILD Docker Image

```
$ ./scripts/build_image.sh
```

RUN Docker Container with or without GPU

```
$ ./scripts/run_container.sh
or
$ ./scripts/run_container_NO_GPU.sh
```

Open Jupyter Notebook

In a browser, open the link that was printed in your console (should look similar to *http://127.0.0.1:8888/?token=73a6fd55dacf4984f616fe60838d64e96abba2087a6cfbda*)

On the webpage, click on the folder **dfnet** and then the Jupyter notebook **IMVIP_Model_Evaluation.ipynb**

Execute Code

Run all code blocks (by pressing shift+enter for each block). Examples from the CASIA benchmark dataset will be displayed on the screen.

Parameter Setting

To control the number of processed images (*MAX_EXAMPLES*) and define how many images are displayed (*SHOW_NTH_RESULT*), you can modify the corresponding variables at the bottom of the Jupyter page.

```
SHOW_NTH_RESULT = 1 # defines how many results are shown: 1...show each result;  n...only sh
MAX_EXAMPLES = 20   # defines number of images to process:  np.infty...all images in folder
```

Folder Structure for Supplementary Material

```
   datasets

      benchmark
          CASIA
          CASIA_GT
   models
      model1
      model2
   scripts
```