README

INSTALLATION

Folders :

- Dataset: dataset for model A and model B for grayscale and RGB images-> https://drive.google.com/a/ualberta.ca/file/d/1tiYUEl_SK-xmBbIra3Ip-Q-Vxbynx9yf/view?usp=sharing
- Model A and Model B: models for execution
- data_colored.py, data_grayscale.py,main_colored.py,main_grayscale.py, models_colored.py and models_grayscale.py: code files
- modelA_colored.bat, modelA_grayscale.bat, modelB_grayscale.bat and modelB_colored.bat: batch files to execute models
- out: output folder
- dataset_src: Scripts for creating dataset

Code Files:

- data.py: creates the data for training the model by creating patches.
- main.py: testing and training code
- models.py: model architecture

Batch files:

- modelA_colored.bat: executes model A for colored images.
- modelA_grayscale.bat: executes model A for grayscale images.
- modelB_colored.bat: executes model B for colored images.
- modelB_grayscale.bat: executes model B for grayscale images.

DEPENDENCIES

Python required: 3.6.5

numpy required: 1.14.3

keras required:2.2.4

tensorflow required:1.12.0

PILLOW required:5.1.0

cv2 required:3.4.4

EXECUTION

- For creating the training dataset, provide the path of the dataset in the scripts provided in ‘Train_Dataset_src’.
- For training the model, provide the training dataset path in the file, execute the data.py for colored or grayscale images, and run. It will create the clean_patches file containing the patches.
- Execute the main.py for grayscale or colored images, it will train the model with clean_patches file by adding noises to the patches.
- Dataset for testing is in ‘Dataset’ folder for both models A nd B.
- In order to test the model, execute the batch files which have parameters for testing dataset.