READ ME FILE FOR MODEL-1

(Super-Resolution-Master)

**Folder Name: Super-Resolution-master**

**🔧 Required Setup**

1. Download the folder named image\_processing\_project and note its location on your system.
2. .ipynb files (Jupyter notebooks) are revised versions; .py files are outdated and not recommended for use.

**🚀 Execution Steps**

**1. SRCNN.ipynb**

* Located inside the Super-Resolution-master folder.
* This is the **first** file you should run.
* No code modifications are required.

Note: SRCNN.py is an old version and should not be used.

**2. SRCNN\_Train\_OS.ipynb**

Used for training the model and making predictions. Update the following paths according to your system:

* train\_path = r"C:\...your\_path...\image\_processing\_project\Dataset\Train"
* val\_path = r"C:\...your\_path...\image\_processing\_project\Dataset\Val\Data"
* model\_path = r"C:\...your\_path...\image\_processing\_project\Super-Resolution-master\trained\_SRCNN\_model.h5"
* output\_path = r"C:\...your\_path...\image\_processing\_project\Super-Resolution-master\Predictions"
* The predicted images will be saved in the Predictions folder.

**3. y\_channel.ipynb**

This notebook processes only the **Y (luminance)** channel. Update the following paths accordingly:

* train\_path = r"C:\...your\_path...\image\_processing\_project\Dataset\Train"
* val\_path = r"C:\...your\_path...\image\_processing\_project\Dataset\Val\Data"
* model\_path = r"C:\...your\_path...\image\_processing\_project\Super-Resolution-master\trained\_SRCNN\_model\_y.weights.h5"
* output\_path = r"C:\...your\_path...\image\_processing\_project\Super-Resolution-master\Predictions\_Y"
* The predicted Y-channel images will be saved in the Predictions\_Y folder.

READ ME FILE FOR MODEL-2

(SRCNN-master)

**Folder Name: SRCNN-master**

**🔧 Required Setup**

1. Download the folder named image\_processing\_project and note its location on your system.
2. .ipynb files (Jupyter notebooks) are revised and up-to-date; .py files are older versions.

**🚀 Execution Steps**

**1. model.ipynb**

* Defines the SRCNN architecture.
* This is the **first** notebook to run.
* No modifications are needed.

**2. data.ipynb**

* Prepares and processes the training data.
* Must be run **second**.

**3. main.py.ipynb**

* Handles the model training.
* Update the paths below based on your setup:
* trainset = DatasetFromFolder(

low\_res\_dir=r"C:\...your\_path...\image\_processing\_project\SRCNN-master\train\Data",

high\_res\_dir=r"C:\...your\_path...\image\_processing\_project\SRCNN-master\train\Labels"

)

* testset = DatasetFromFolder(

low\_res\_dir=r"C:\...your\_path...\image\_processing\_project\SRCNN-master\test\Data",

high\_res\_dir=r"C:\...your\_path...\image\_processing\_project\SRCNN-master\test\Labels"

)

# Model will be saved to:

* save\_path = f"model\_{epoch+1}.pth"

**4. run.ipynb**

* Runs the trained model on validation data to generate predictions.
* Before running, make sure to configure the following paths:
* args.model = r"C:\...your\_path...\image\_processing\_project\SRCNN-master\model\_10.pth"
* val\_data\_dir = r"C:\...your\_path...\image\_processing\_project\SRCNN-master\val\Data"
* output\_dir = os.path.join(os.path.dirname(val\_data\_dir), "Predicted")
* Predictions will be saved in the Predicted folder in SRCNN-master->val.

⚠️ **Important:**  
Make sure that all the paths in the scripts reflect the correct location where your image\_processing\_project folder is downloaded. Incorrect paths will cause the notebooks to fail.