

Project Title: Image Augmentation

Team Details:

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Project Directory:

/assets/ : MakeData.ui,Interface.ui,logo.png,temp.png.

/sample/ : Sample images to test run.

/test/ : Sample of tested images.

/ : aug.py
requirements.txt
readme.pdf

Packages :

PyQt5==5.15.4

tensorflow==2.4.1

Keras==2.4.3

numpy==1.19.5

scipy==1.6.1

matplotlib==3.3.4

To install the above packages requirements.txt should be located in the project directory.

Run command : pip install -r requirements.txt

Alternate command : pip3 install -r requirements.txt

Note: To run the above commands , the python environment should be equipped with pip/pip3 scripts.

How to run the project ?

aug.py is the original file containing the code.

To run the project following steps are to be followed:

1. Navigate to the project directory.
2. Open Command Prompt/Terminal in the project directory.
3. Write command : **python aug.py**

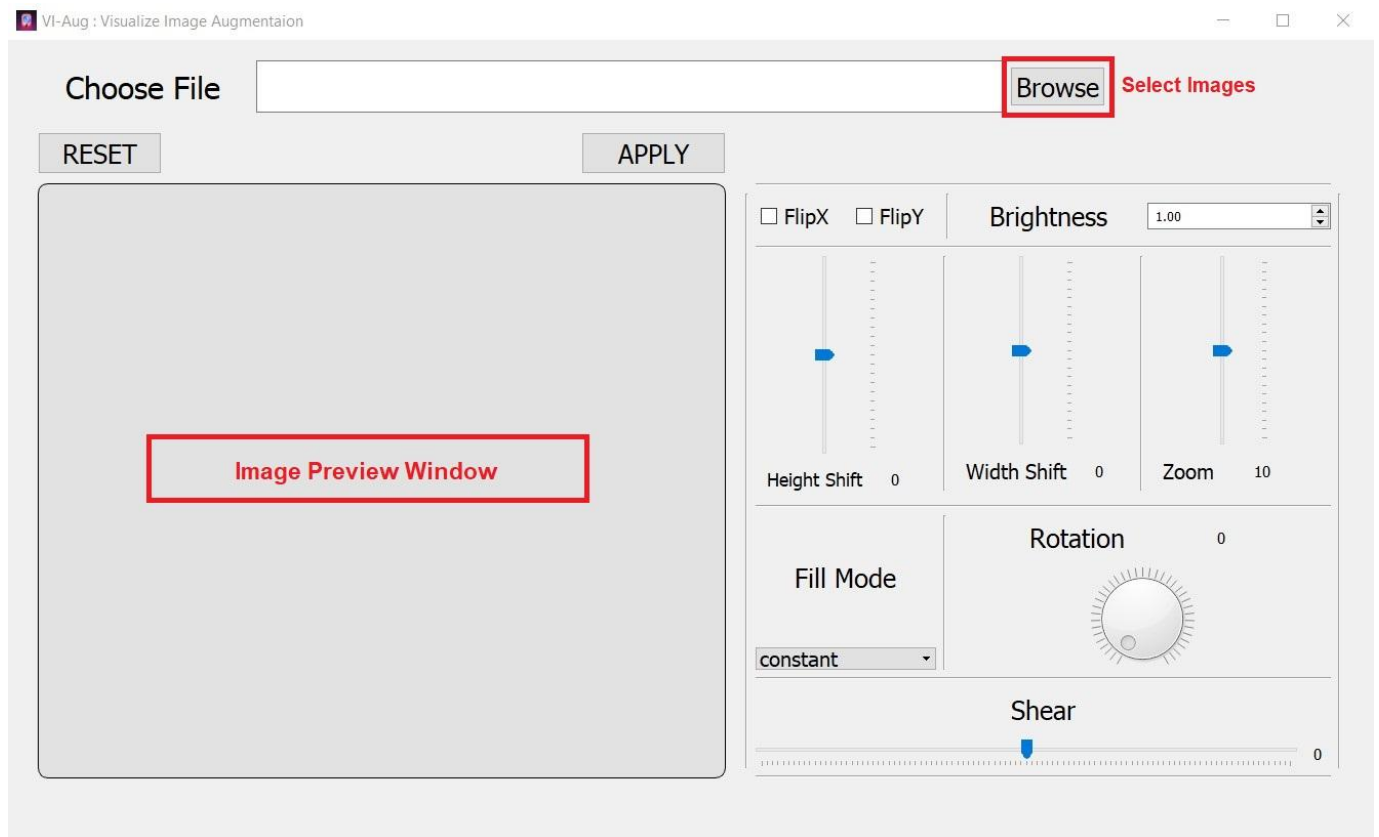
If this doesn't work write : **python3 aug.py**

Input: Image files (multiple at a time allowed) .

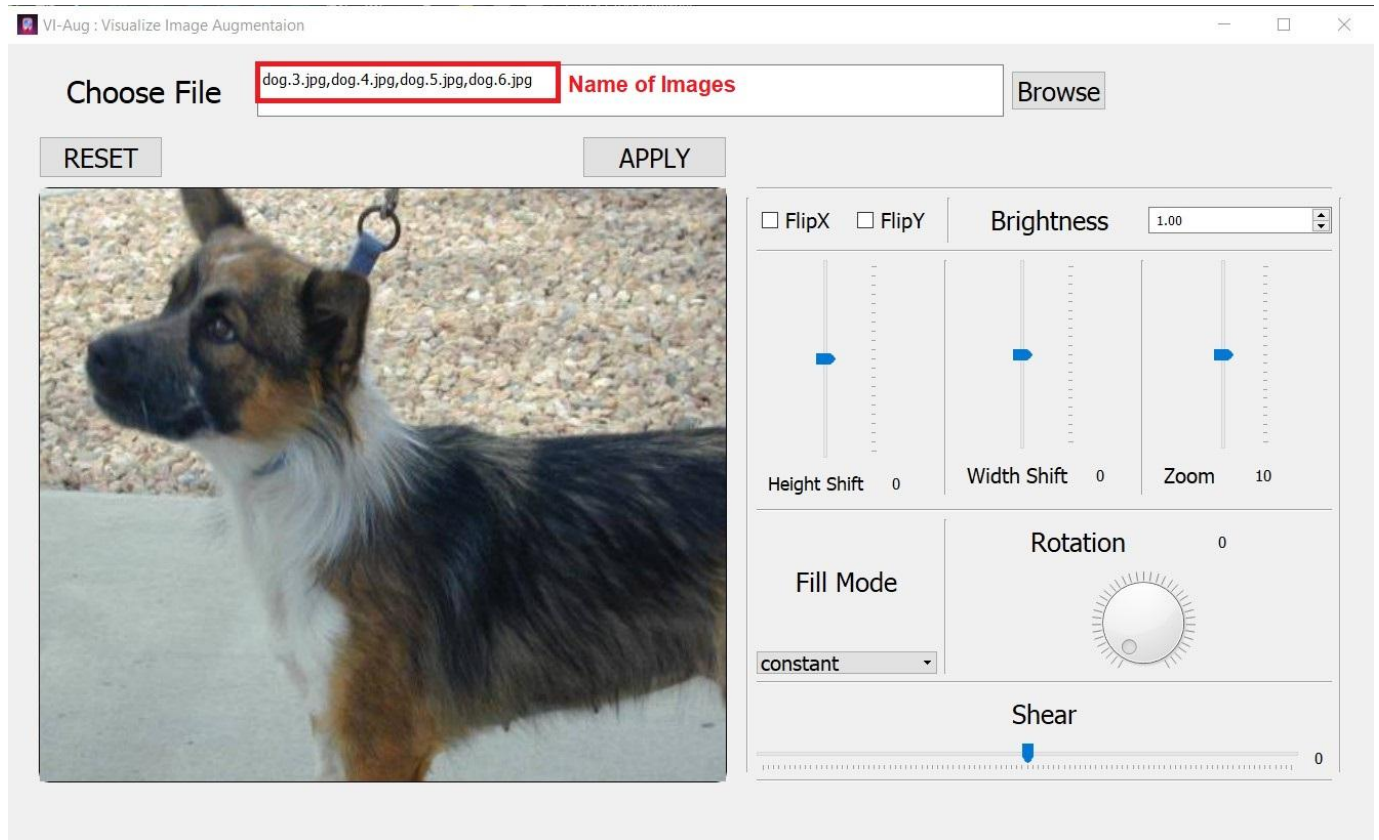
Output: Batches of Images as selected by the user when effects are applied images.
Users can select the destination folder.

Tool Components :

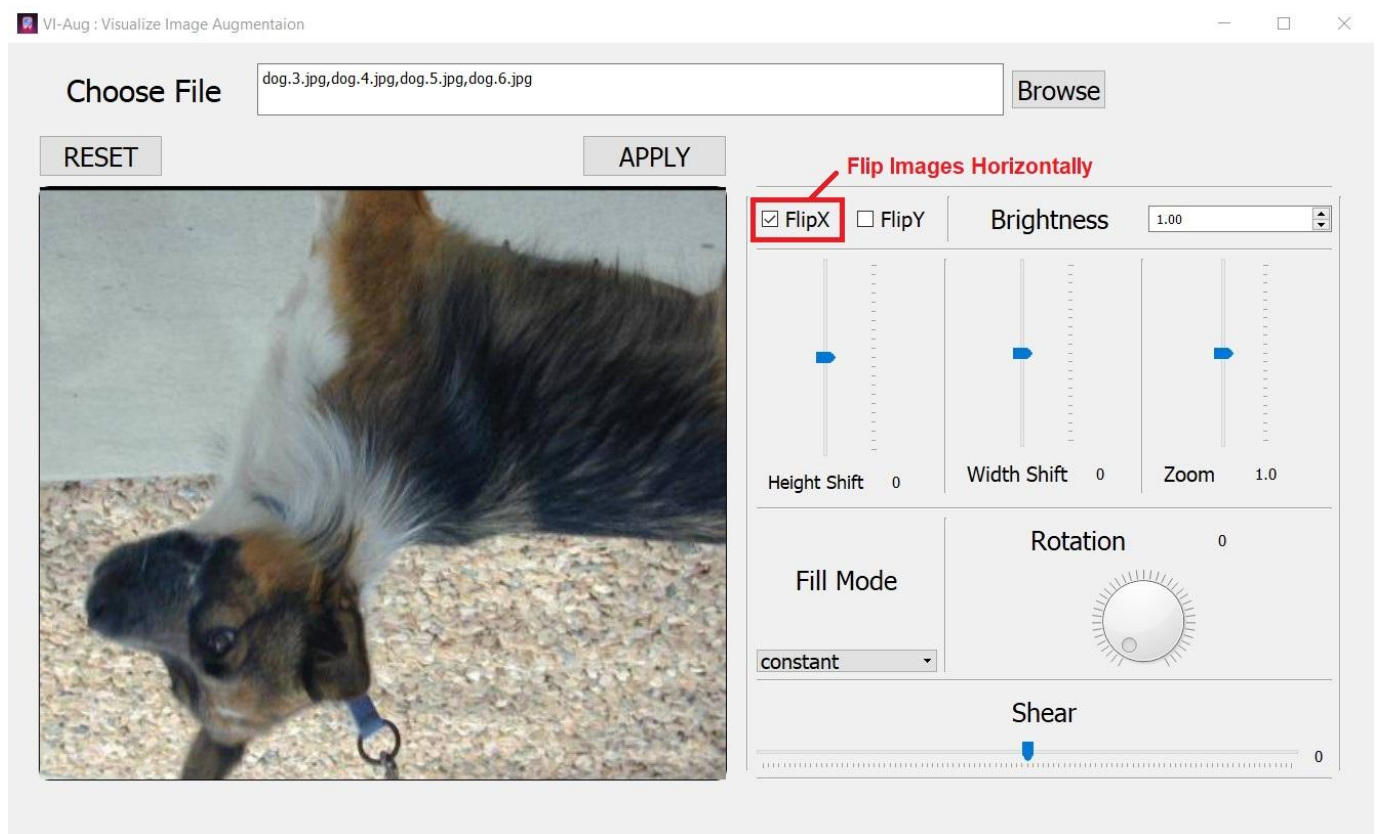
Browse: Select Images from Directory



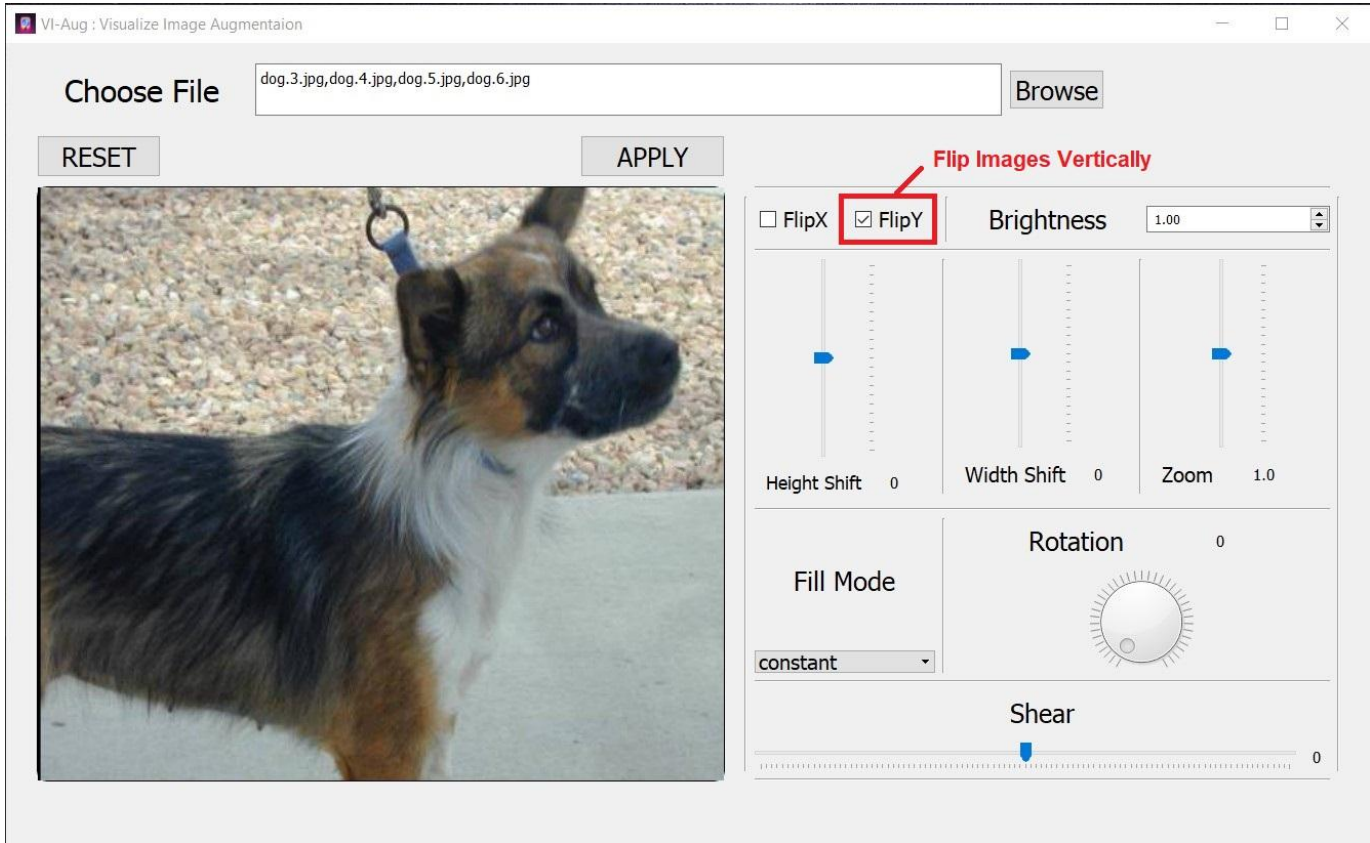
Allowed Image extensions : jpg,jpeg,png,gif.



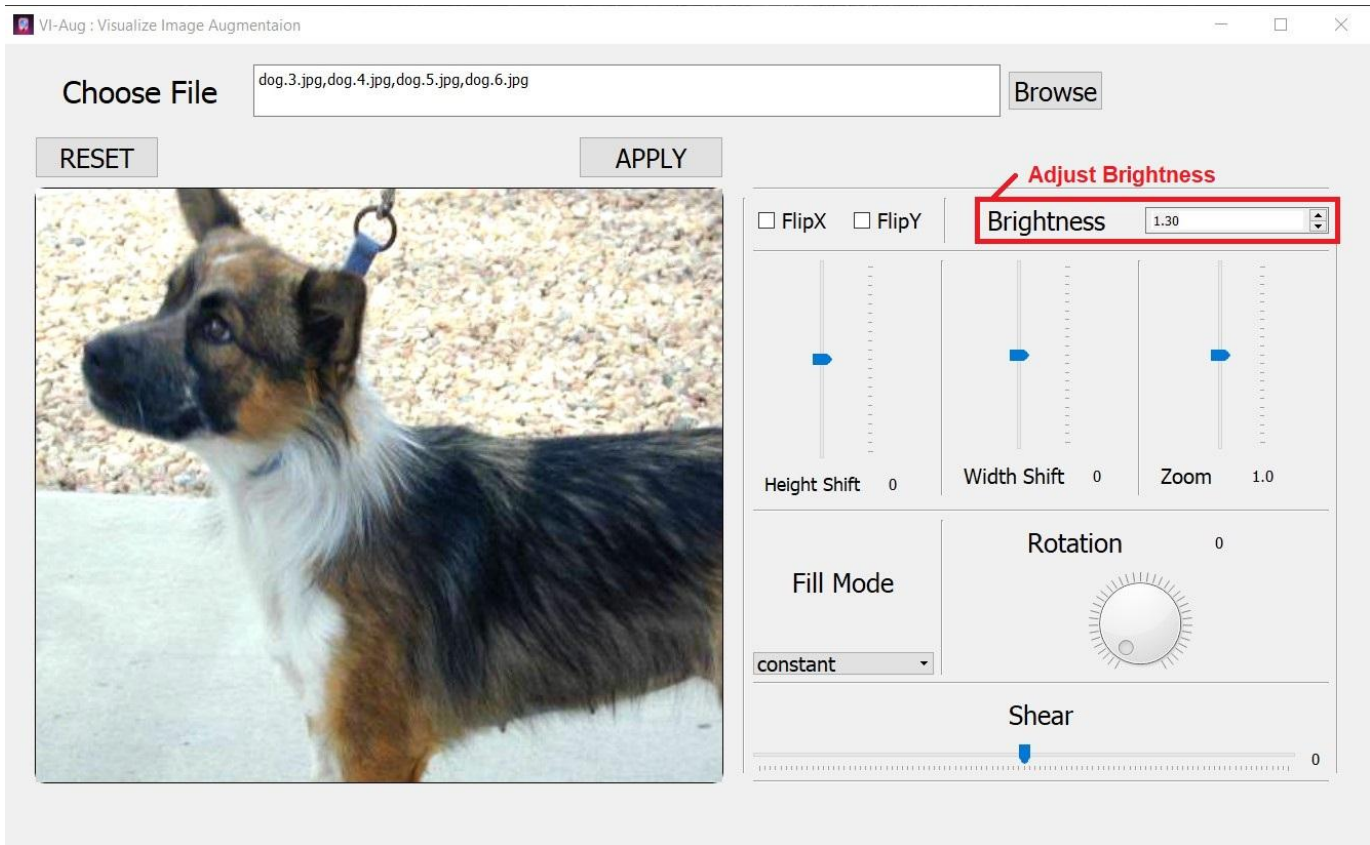
Flip-X : Flip Image along X-axis.



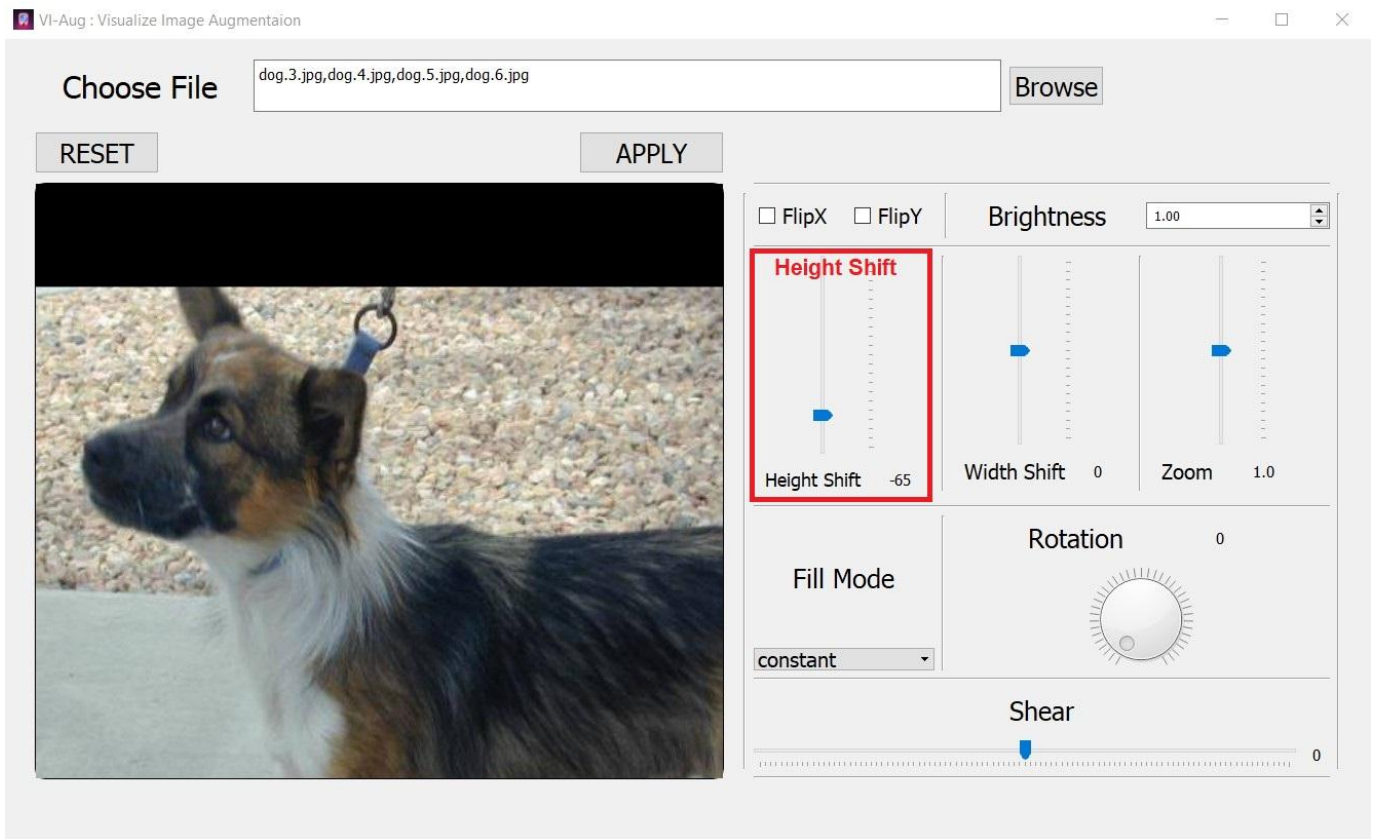
Flip-Y : Flip Image along Y-axis.



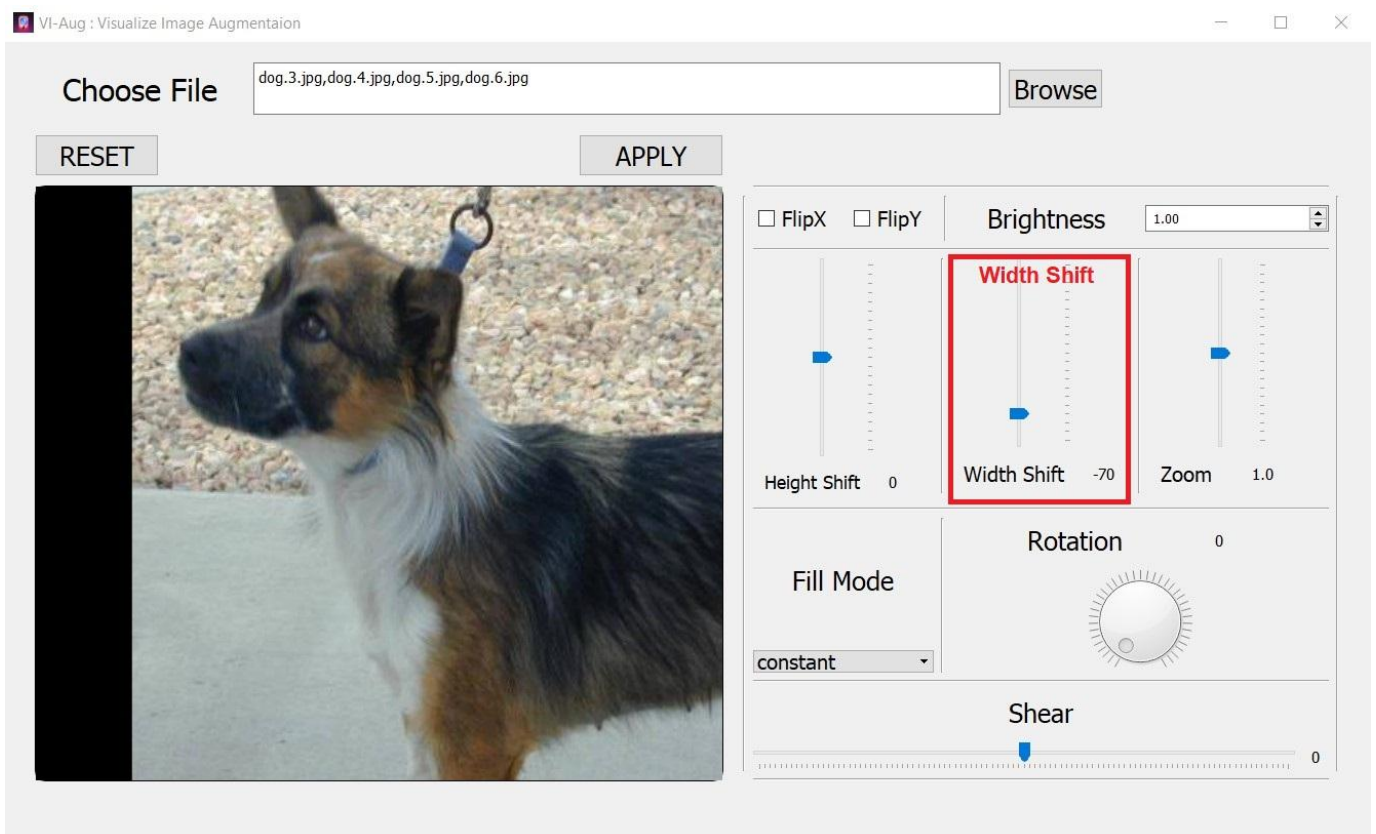
Brightness : Adjust brightness.



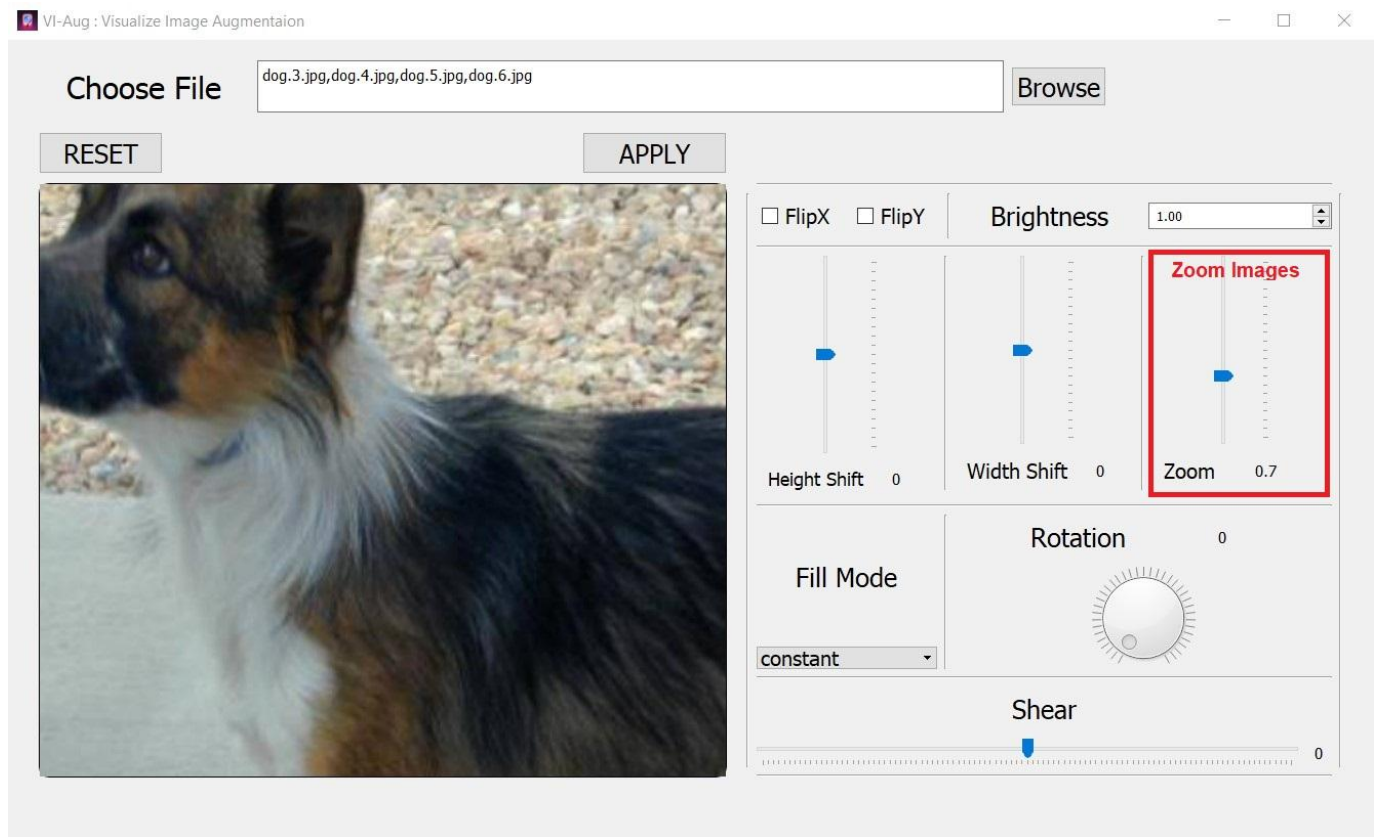
Height Shift : Move Image Vertically.



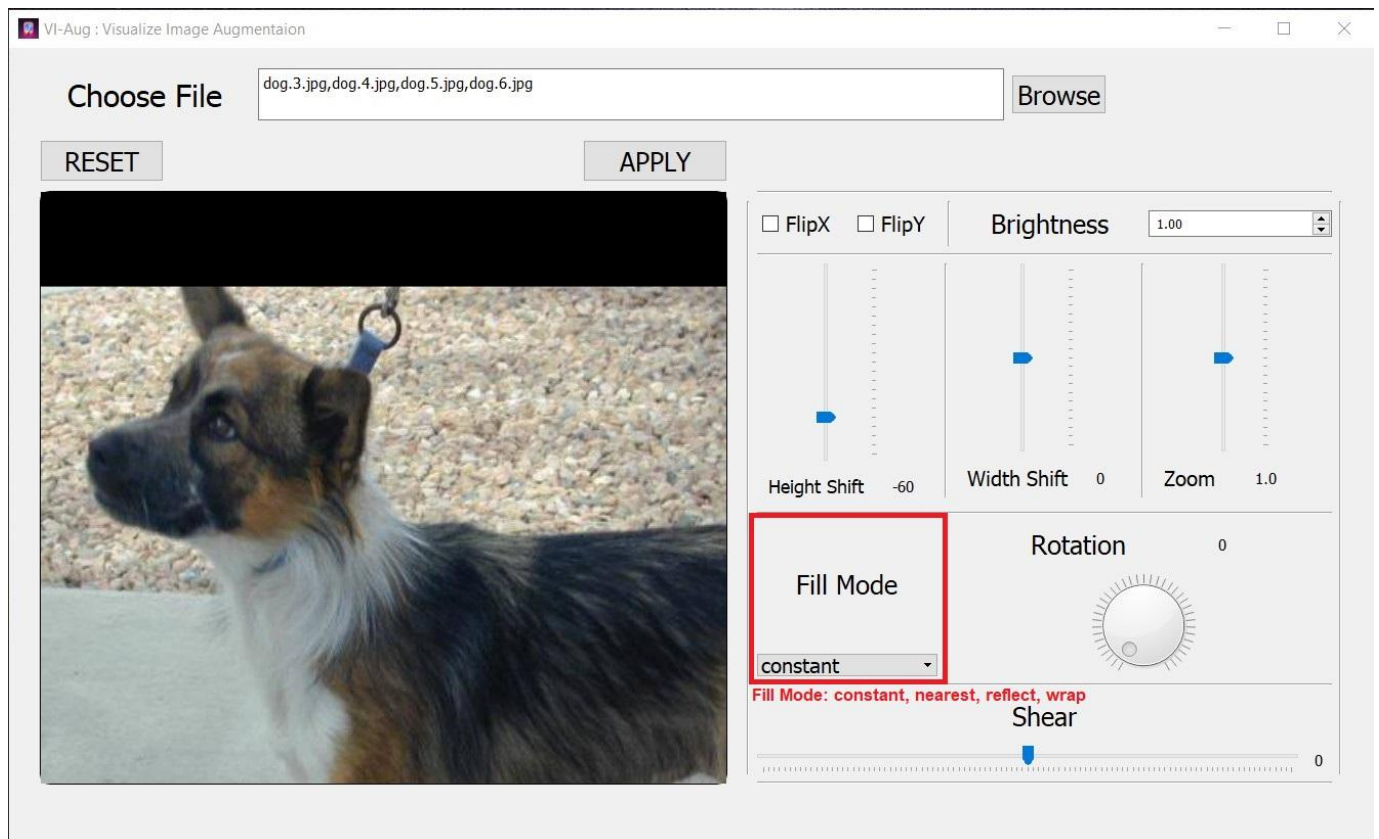
Width Shift : Move Image Horizontally.



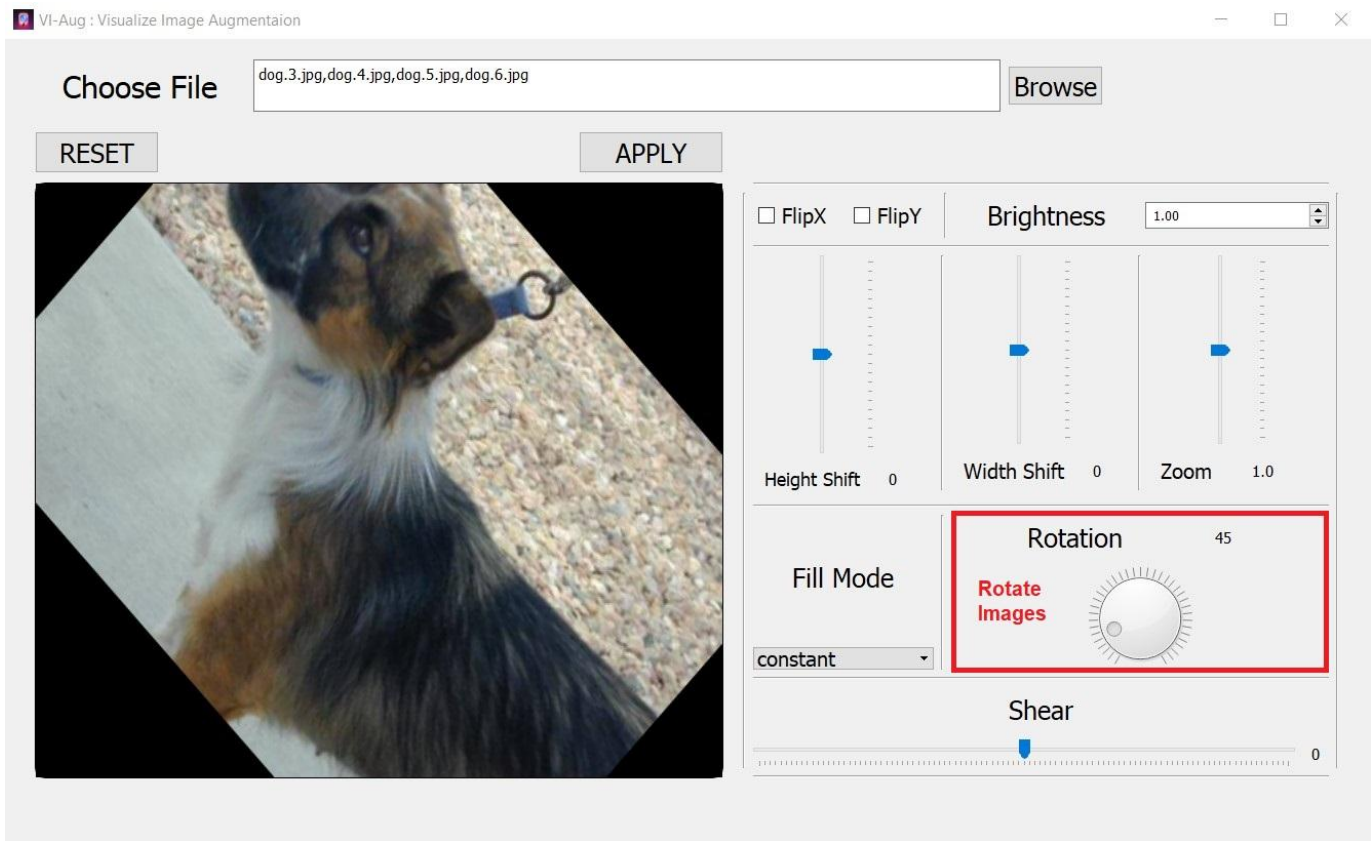
Zoom : Zoom in or Zoom out.



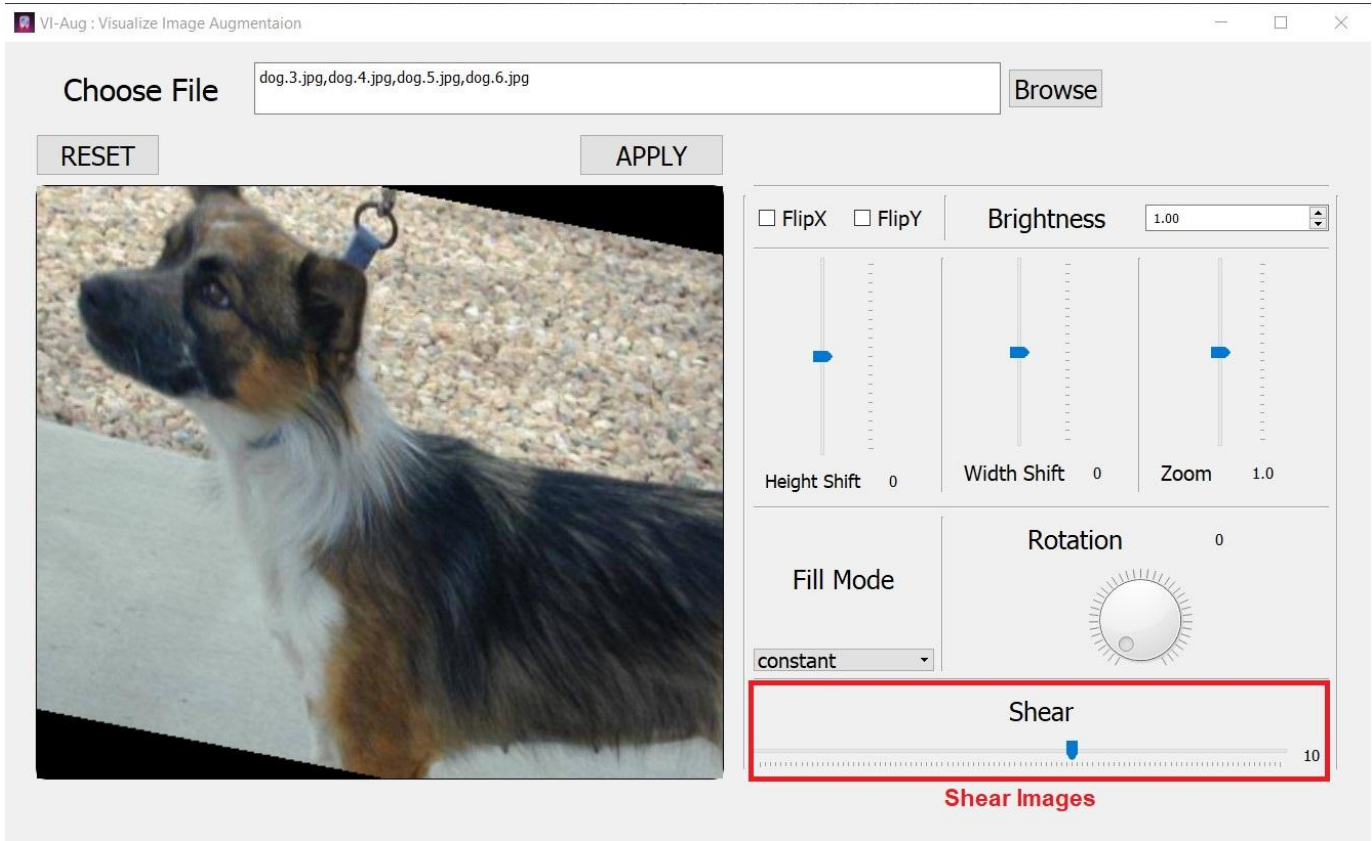
Fillmode: Select fill options.



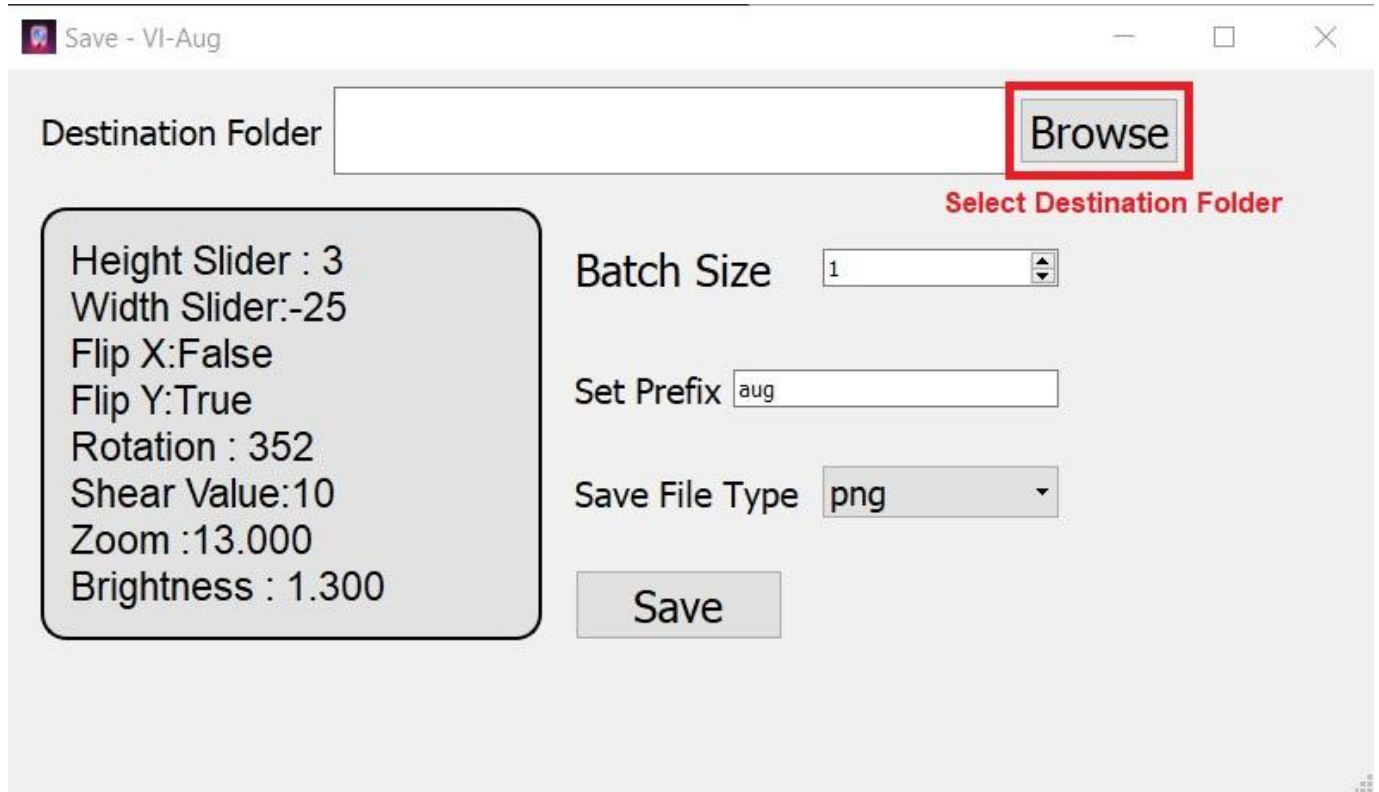
Rotation: Rotate the Image 0° to 360°.



Shear : Stretch image horizontally.



Browse: Select Destination Folder.



Save - VI-Aug

Destination Folder

Browse

Select Destination Folder

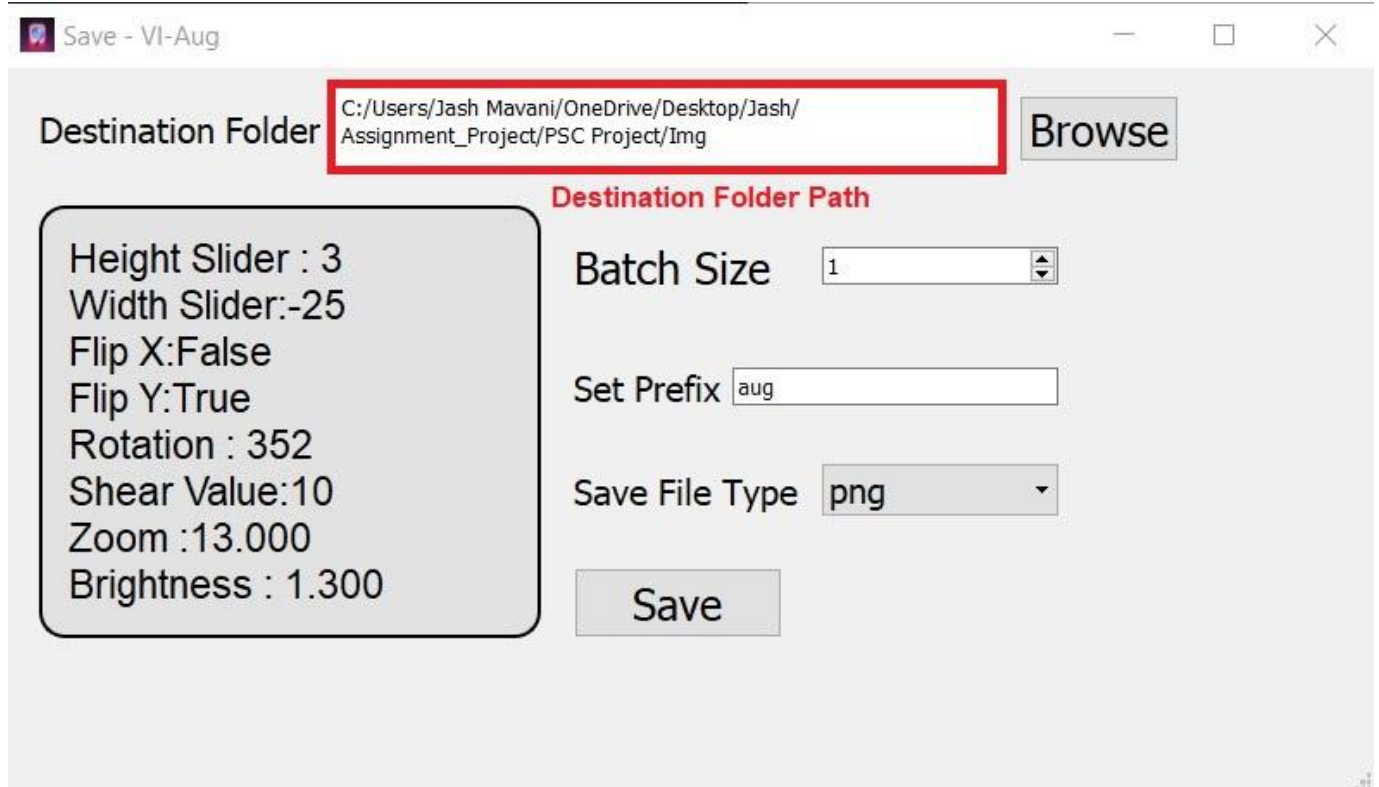
Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size

Set Prefix

Save File Type

Save



Save - VI-Aug

Destination Folder

Browse

Destination Folder Path

Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size

Set Prefix

Save File Type

Save

Batch Size : Select batch size for each photo to augment.

Save - VI-Aug

Destination Folder

Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size

Set Prefix

Save File Type

Prefix : Mention prefix for given batch of images(default prefix : aug).

Save - VI-Aug

Destination Folder

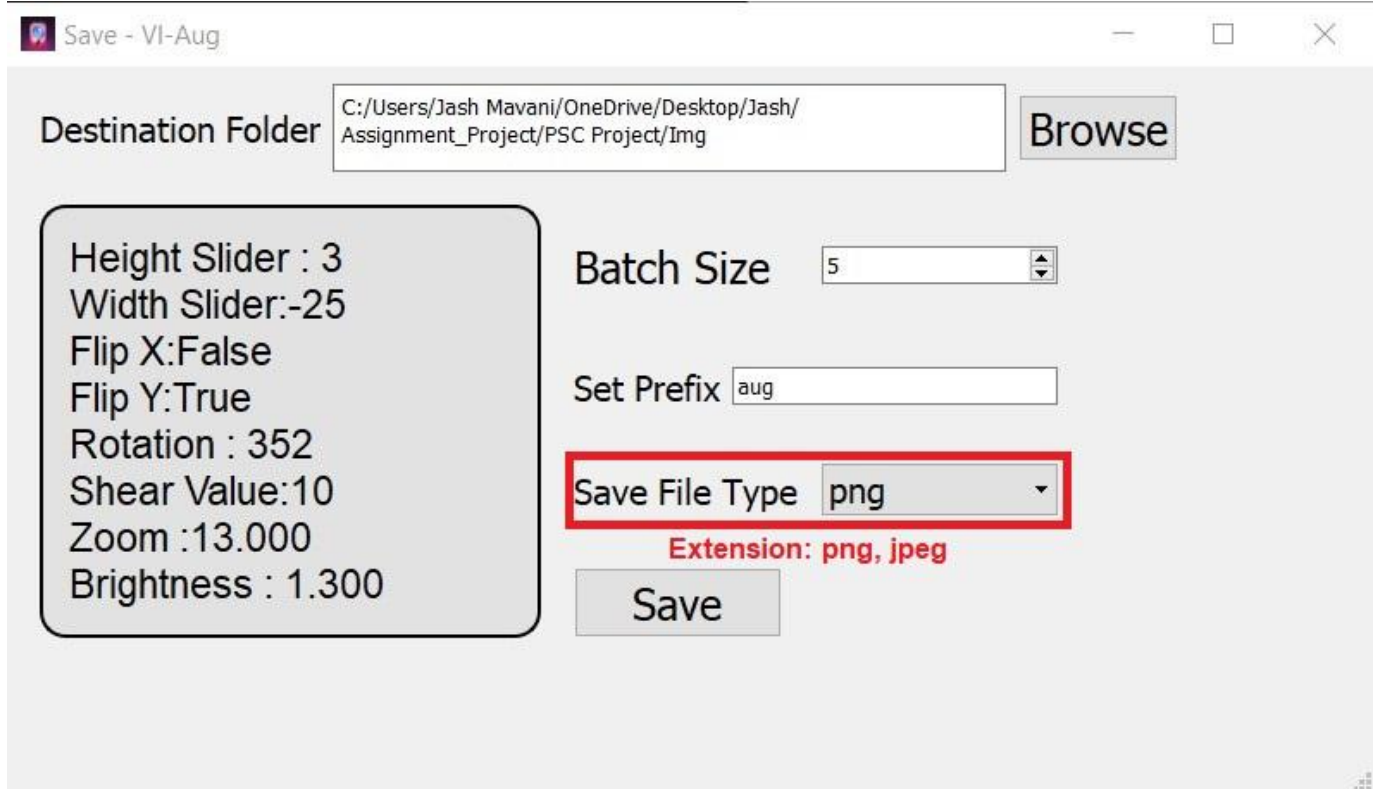
Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size

Set Prefix

Save File Type

Extension : Select extension for given batch of images(default extension : .png).
Allowed Extensions : png , jpeg .



The screenshot shows a window titled "Save - VI-Aug" with standard Windows window controls (minimize, maximize, close). The interface includes a "Destination Folder" section with a text box containing the path "C:/Users/Jash Mavani/OneDrive/Desktop/Jash/Assignment_Project/PSC Project/Img" and a "Browse" button. On the left, a rounded rectangle contains a list of settings: "Height Slider : 3", "Width Slider:-25", "Flip X:False", "Flip Y:True", "Rotation : 352", "Shear Value:10", "Zoom :13.000", and "Brightness : 1.300". To the right of this are "Batch Size" (a spinner box set to 5) and "Set Prefix" (a text box with "aug"). Below these is a "Save File Type" dropdown menu set to "png", which is highlighted with a red rectangle. Underneath the dropdown, the text "Extension: png, jpeg" is displayed in red. At the bottom center is a "Save" button.

Save - VI-Aug

Destination Folder C:/Users/Jash Mavani/OneDrive/Desktop/Jash/Assignment_Project/PSC Project/Img Browse

Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size 5

Set Prefix aug

Save File Type png

Extension: png, jpeg

Save

Save: Save images at the selected destination folder

Destination Folder

C:/Users/Jash Mavani/OneDrive/Desktop/Jash/
Assignment_Project/PSC Project/Img

Browse

Height Slider : 3
Width Slider:-25
Flip X:False
Flip Y:True
Rotation : 352
Shear Value:10
Zoom :13.000
Brightness : 1.300

Batch Size

5

Set Prefix

aug

Save File Type

png

Save

Save Images