

Image-ica - The Photo Editor

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Chapter 1

Namespace Index

1.1 Packages

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Hierarchical Index

2.1 Class Hierarchy

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Chapter 3

Class Index

3.1 Class List

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File Index

4.1 File List

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Chapter 5

Namespace Documentation

5.1 color_filter Namespace Reference

Classes

- class [ColorFilters](#)
Choice of filters to use.

Functions

- def [sepia](#) (img)
Apply Sepia filter.
- def [black_white](#) (img)
Apply Black and White filter.
- def [negative](#) (img)
Apply Negative filter.
- def [gray](#) (img)
Apply Greyscale filter.
- def [color_filter](#) (img, filter_name)
Apply a filter.

Variables

- [logger](#)
Contains logging information.

5.1.1 Detailed Description

Apply filters to PIL.image

5.1.2 Function Documentation

5.1.2.1 black_white()

```
def color_filter.black_white (
    img )
```

Apply Black and White filter.

This function applies Black and White filter on the supplied image.

Parameters

| | | |
|----|------------|------------|
| in | <i>img</i> | Image file |
|----|------------|------------|

Returns

im2 Black and White applied image

5.1.2.2 color_filter()

```
def color_filter.color_filter (
    img,
    filter_name )
```

Apply a filter.

This function applies the chosen filter on the supplied image.

Parameters

| | | |
|----|--------------------|----------------|
| in | <i>img</i> | Image file |
| in | <i>filter_name</i> | Name of filter |

Returns

img_copy Copy of the image with the applied filter

5.1.2.3 gray()

```
def color_filter.gray (
    img )
```

Apply Greyscale filter.

This function applies Greyscale filter on the supplied image.

Parameters

| | | |
|----|------------|------------|
| in | <i>img</i> | Image file |
|----|------------|------------|

Returns

im2 Greyscale applied image

5.1.2.4 negative()

```
def color_filter.negative (  
    img )
```

Apply Negative filter.

This function applies Negative filter on the supplied image.

Parameters

| | | |
|----|------------|------------|
| in | <i>img</i> | Image file |
|----|------------|------------|

Returns

im2 Negative applied image

5.1.2.5 sepia()

```
def color_filter.sepia (  
    img )
```

Apply Sepia filter.

This function applies Sepia filter on the supplied image.

Parameters

| | | |
|----|------------|------------|
| in | <i>img</i> | Image file |
|----|------------|------------|

Returns

im2 Sepia applied image

5.1.3 Variable Documentation

5.1.3.1 logger

`color_filter.logger`

Contains logging information.

5.2 img_helper Namespace Reference

Functions

- def `get_img` (path)
Retrieve image.
- def `resize` (img, width, height)
Resize image.
- def `rotate` (img, angle)
Rotate image.
- def `color_filter` (img, filter_name)
Apply a filter.
- def `brightness` (img, factor)
Adjust brightness of image.
- def `contrast` (img, factor)
Adjust contrast of image.
- def `sharpness` (img, factor)
Adjust sharpness of image.
- def `flip_left` (img)
Flip image.
- def `flip_top` (img)
Flip image.
- def `save` (img, path)
Save image.
- def `open_img` (img)
Retrieve image.
- def `hist_red` (img, ratio, ratio_prev)
Adjust red histogram of image.
- def `hist_green` (img, ratio, ratio_prev)
Adjust green histogram of image.
- def `hist_blue` (img, ratio, ratio_prev)
Adjust blue histogram of image.

Variables

- `logger` = logging.getLogger()
Logger Function.
- float `CONTRAST_FACTOR_MAX`
Maximum contrast factor.
- float `CONTRAST_FACTOR_MIN`
Minimum contrast factor.
- int `SHARPNESS_FACTOR_MAX`

- Maximum sharpness factor.*
 - int [SHARPNESS_FACTOR_MIN](#)
 - Minimum sharpness factor.*
 - float [BRIGHTNESS_FACTOR_MAX](#)
 - Maximum brightness factor.*
 - float [BRIGHTNESS_FACTOR_MIN](#)
 - Minimum brightness factor.*
 - int [HIST_FACTOR_MAX](#)
 - Maximum histogram factor.*
 - float [HIST_FACTOR_MIN](#)
 - Minimum histogram factor.*

5.2.1 Detailed Description

Image operations

5.2.2 Function Documentation

5.2.2.1 brightness()

```
def img_helper.brightness (
    img,
    factor )
```

Adjust brightness of image.

This function adjusts the brightness of the supplied image.

Parameters

| | | |
|----|---------------|-------------------|
| in | <i>img</i> | Image file |
| in | <i>factor</i> | Brightness factor |

Returns

img_copy Copy of the image with the adjusted brightness

5.2.2.2 color_filter()

```
def img_helper.color_filter (
    img,
    filter_name )
```

Apply a filter.

This function applies the chosen filter on the supplied image.

Parameters

| | | |
|----|--------------------|----------------|
| in | <i>img</i> | Image file |
| in | <i>filter_name</i> | Name of filter |

Returns

img_copy Copy of the image with the applied filter

5.2.2.3 contrast()

```
def img_helper.contrast (
    img,
    factor )
```

Adjust contrast of image.

This function adjusts the contrast of the supplied image.

Parameters

| | | |
|----|---------------|-----------------|
| in | <i>img</i> | Image file |
| in | <i>factor</i> | Contrast factor |

Returns

img_copy Copy of the image with the adjusted contrast

5.2.2.4 flip_left()

```
def img_helper.flip_left (
    img )
```

Flip image.

This function flips the image horizontally

Parameters

| | | |
|----|------------|-----------|
| in | <i>img</i> | PIL image |
|----|------------|-----------|

Returns

img2 Flipped image

5.2.2.5 flip_top()

```
def img_helper.flip_top (
    img )
```

Flip image.

This function flips the image vertically

Parameters

| | | |
|----|------------|-----------|
| in | <i>img</i> | PIL image |
|----|------------|-----------|

Returns

img2 Flipped image

5.2.2.6 get_img()

```
def img_helper.get_img (
    path )
```

Retreive image.

This function opens the image

Parameters

| | | |
|----|-------------|------------|
| in | <i>path</i> | Image path |
|----|-------------|------------|

Returns

Image Image

5.2.2.7 hist_blue()

```
def img_helper.hist_blue (
    img,
    ratio,
    ratio_prev )
```

Adjust blue histogram of image.

This function adjusts the blueness of the supplied image.

Parameters

| | | |
|----|-------------------|-----------------------|
| in | <i>img</i> | Image file |
| in | <i>ratio</i> | Ratio factor |
| in | <i>ratio_prev</i> | Previous ratio factor |

Returns

img Image with the blueness greenness

5.2.2.8 hist_green()

```
def img_helper.hist_green (
    img,
    ratio,
    ratio_prev )
```

Adjust green histogram of image.

This function adjusts the greenness of the supplied image.

Parameters

| | | |
|----|-------------------|-----------------------|
| in | <i>img</i> | Image file |
| in | <i>ratio</i> | Ratio factor |
| in | <i>ratio_prev</i> | Previous ratio factor |

Returns

img Image with the adjusted greenness

5.2.2.9 hist_red()

```
def img_helper.hist_red (
    img,
    ratio,
    ratio_prev )
```

Adjust red histogram of image.

This function adjusts the redness of the supplied image.

Parameters

| | | |
|----|-------------------|-----------------------|
| in | <i>img</i> | Image file |
| in | <i>ratio</i> | Ratio factor |
| in | <i>ratio_prev</i> | Previous ratio factor |

Returns

img Image with the adjusted redness

5.2.2.10 open_img()

```
def img_helper.open_img (
    img )
```

Retreive image.

This function opens the image

Parameters

| | | |
|----|------------|-----------|
| in | <i>img</i> | PIL image |
|----|------------|-----------|

Returns

img2 Pixel array

5.2.2.11 resize()

```
def img_helper.resize (
    img,
    width,
    height )
```

Resize image.

This function resizes the image

Parameters

| | | |
|----|---------------|--------------|
| in | <i>img</i> | Image file |
| in | <i>width</i> | Image width |
| in | <i>height</i> | Image height |

Returns

img Resized image

Resize image

5.2.2.12 rotate()

```
def img_helper.rotate (
    img,
    angle )
```

Rotate image.

This function rotates the image

Parameters

| | | |
|----|--------------|-------------------|
| in | <i>img</i> | Image file |
| in | <i>angle</i> | Angle of rotation |

Returns

img Rotated image

5.2.2.13 save()

```
def img_helper.save (
    img,
    path )
```

Save image.

This function save the image

Parameters

| | | |
|----|-------------|------------------|
| in | <i>img</i> | Image |
| in | <i>path</i> | Destination path |

5.2.2.14 sharpness()

```
def img_helper.sharpness (
    img,
    factor )
```

Adjust sharpness of image.

This function adjusts the sharpness of the supplied image.

Parameters

| | | |
|----|---------------|------------------|
| in | <i>img</i> | Image file |
| in | <i>factor</i> | Sharpness factor |

Returns

`img_copy` Copy of the image with the adjusted sharpness

5.2.3 Variable Documentation**5.2.3.1 BRIGHTNESS_FACTOR_MAX**

`img_helper.BRIGHTNESS_FACTOR_MAX`

Maximum brightness factor.

5.2.3.2 BRIGHTNESS_FACTOR_MIN

`img_helper.BRIGHTNESS_FACTOR_MIN`

Minimum brightness factor.

5.2.3.3 CONTRAST_FACTOR_MAX

`img_helper.CONTRAST_FACTOR_MAX`

Maximum contrast factor.

5.2.3.4 CONTRAST_FACTOR_MIN

`img_helper.CONTRAST_FACTOR_MIN`

Minimun contrast factor.

5.2.3.5 HIST_FACTOR_MAX

```
img_helper.HIST_FACTOR_MAX
```

Maximum histogram factor.

5.2.3.6 HIST_FACTOR_MIN

```
img_helper.HIST_FACTOR_MIN
```

Minimum histogram factor.

5.2.3.7 logger

```
img_helper.logger = logging.getLogger()
```

Logger Function.

This function creates a new object with name logger.

Note

With the logging module imported, you can use something called a “logger” to log messages that you want to see. By default, there are 5 # standard levels indicating the severity of events. Each has a corresponding method that can be used to log events at that level of severity.

5.2.3.8 SHARPNESS_FACTOR_MAX

```
img_helper.SHARPNESS_FACTOR_MAX
```

Maximum sharpness factor.

5.2.3.9 SHARPNESS_FACTOR_MIN

```
img_helper.SHARPNESS_FACTOR_MIN
```

Minimum sharpness factor.

5.3 photo_editor Namespace Reference

Classes

- class [ActionTabs](#)
Class for layout.
- class [AdjustingTab](#)
Class for adjustment features.
- class [FiltersTab](#)
- class [HistogramTab](#)
Class for histogram adjustment.
- class [ImageicaUI](#)
Base class.
- class [MiscellaneousTab](#)
Class for miscellaneous purposes.
- class [ModificationTab](#)
Class for modifying images.
- class [Operations](#)
Class for image operations.
- class [PhotoViewer](#)
Photo display class.
- class [QVLine](#)
Add vertical line to UI.
- class [RotationTab](#)
Class for adjustment features.
- class [SecurityTab](#)
Class for security features.

Functions

- def [create_button](#) (name, minWidth, connectFunction, enablestatus, stylesheet)
- def [create_slider](#) (obj, connectFunction)

Variables

- [logger](#) = logging.getLogger()
- string [THUMB_BORDER_COLOR_ACTIVE](#) = "#3893F4"
- string [THUMB_BORDER_COLOR](#) = "#ccc"
- int [BTN_MIN_WIDTH](#) = 120
- tuple [ROTATION_BTN_SIZE](#) = (70, 30)
- int [THUMB_SIZE](#) = 120
- int [SLIDER_MIN_VAL](#) = -99
- int [SLIDER_MAX_VAL](#) = 100
- int [SLIDER_DEF_VAL](#) = 0
- [operations](#) = [Operations](#)()
- [app](#) = QApplication(sys.argv)
- [win](#) = [ImageicaUI](#)()

5.3.1 Detailed Description

Base program

5.3.2 Function Documentation

5.3.2.1 create_button()

```
def photo_editor.create_button (
    name,
    minWidth,
    connectFunction,
    enablestatus,
    stylesheet )
```

5.3.2.2 create_slider()

```
def photo_editor.create_slider (
    obj,
    connectFunction )
```

5.3.3 Variable Documentation

5.3.3.1 app

```
photo_editor.app = QApplication(sys.argv)
```

5.3.3.2 BTN_MIN_WIDTH

```
int photo_editor.BTN_MIN_WIDTH = 120
```

5.3.3.3 logger

```
photo_editor.logger = logging.getLogger()
```


5.3.3.4 operations

```
photo_editor.operations = Operations()
```

5.3.3.5 ROTATION_BTN_SIZE

```
tuple photo_editor.ROTATION_BTN_SIZE = (70, 30)
```

5.3.3.6 SLIDER_DEF_VAL

```
int photo_editor.SLIDER_DEF_VAL = 0
```

5.3.3.7 SLIDER_MAX_VAL

```
int photo_editor.SLIDER_MAX_VAL = 100
```

5.3.3.8 SLIDER_MIN_VAL

```
int photo_editor.SLIDER_MIN_VAL = -99
```

5.3.3.9 THUMB_BORDER_COLOR

```
string photo_editor.THUMB_BORDER_COLOR = "#ccc"
```

5.3.3.10 THUMB_BORDER_COLOR_ACTIVE

```
string photo_editor.THUMB_BORDER_COLOR_ACTIVE = "#3893F4"
```

5.3.3.11 THUMB_SIZE

```
int photo_editor.THUMB_SIZE = 120
```

5.3.3.12 win

```
photo_editor.win = ImageicaUI()
```

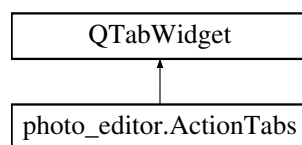

Chapter 6

Class Documentation

6.1 photo_editor.ActionTabs Class Reference

Class for layout.

Inheritance diagram for photo_editor.ActionTabs:



Public Member Functions

- `def __init__(self, parent)`

Public Attributes

- `parent`
- `filters_tab`
- `adjustment_tab`
- `modification_tab`
- `rotation_tab`
- `histogram_tab`
- `security_tab`
- `miscellaneous_tab`

6.1.1 Detailed Description

Class for layout.

This class defines layout features of respective feaatures

Action tabs widget

6.1.2 Constructor & Destructor Documentation

6.1.2.1 `__init__()`

```
def photo_editor.ActionTabs.__init__ (
    self,
    parent )
```

6.1.3 Member Data Documentation

6.1.3.1 `adjustment_tab`

```
photo_editor.ActionTabs.adjustment_tab
```

6.1.3.2 `filters_tab`

```
photo_editor.ActionTabs.filters_tab
```

6.1.3.3 `histogram_tab`

```
photo_editor.ActionTabs.histogram_tab
```

6.1.3.4 `miscellaneous_tab`

```
photo_editor.ActionTabs.miscellaneous_tab
```

6.1.3.5 `modification_tab`

```
photo_editor.ActionTabs.modification_tab
```

6.1.3.6 parent

`photo_editor.ActionTabs.parent`

6.1.3.7 rotation_tab

`photo_editor.ActionTabs.rotation_tab`

6.1.3.8 security_tab

`photo_editor.ActionTabs.security_tab`

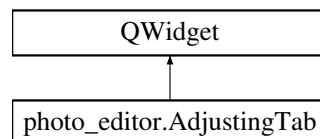
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.2 photo_editor.AdjustingTab Class Reference

Class for adjustment features.

Inheritance diagram for `photo_editor.AdjustingTab`:



Public Member Functions

- `def __init__(self, parent)`
- `def reset_sliders(self)`
- `def on_contrast_slider_released(self)`
- `def on_brightness_slider_released(self)`
- `def on_sharpness_slider_released(self)`

Public Attributes

- `parent`
- `contrast_slider`
- `brightness_slider`
- `sharpness_slider`

6.2.1 Detailed Description

Class for adjustment features.

This class defines adjustment features like contrast

Adjusting tab widget

6.2.2 Constructor & Destructor Documentation

6.2.2.1 `__init__()`

```
def photo_editor.AdjustingTab.__init__ (
    self,
    parent )
```

6.2.3 Member Function Documentation

6.2.3.1 `on_brightness_slider_released()`

```
def photo_editor.AdjustingTab.on_brightness_slider_released (
    self )
```

6.2.3.2 `on_contrast_slider_released()`

```
def photo_editor.AdjustingTab.on_contrast_slider_released (
    self )
```

6.2.3.3 `on_sharpness_slider_released()`

```
def photo_editor.AdjustingTab.on_sharpness_slider_released (
    self )
```

6.2.3.4 reset_sliders()

```
def photo_editor.AdjustingTab.reset_sliders (
    self )
```

6.2.4 Member Data Documentation

6.2.4.1 brightness_slider

```
photo_editor.AdjustingTab.brightness_slider
```

6.2.4.2 contrast_slider

```
photo_editor.AdjustingTab.contrast_slider
```

6.2.4.3 parent

```
photo_editor.AdjustingTab.parent
```

6.2.4.4 sharpness_slider

```
photo_editor.AdjustingTab.sharpness_slider
```

The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.3 color_filter.ColorFilters Class Reference

Choice of filters to use.

Static Public Attributes

- dictionary [filters](#)
Dictionary containing list of filters.
- string [SEPIA](#)
Sepia filter.
- string [NEGATIVE](#)
Negative filter.
- string [BLACK_WHITE](#)
Black and White filter.
- string [GRAY](#)
Grayscale filter.

6.3.1 Detailed Description

Choice of filters to use.

This class defines filters to set on images such as Sepia, Negative and Greyscale

6.3.2 Member Data Documentation

6.3.2.1 BLACK_WHITE

```
color_filter.ColorFilters.BLACK_WHITE [static]
```

Black and White filter.

6.3.2.2 filters

```
color_filter.ColorFilters.filters [static]
```

Dictionary containing list of filters.

6.3.2.3 GRAY

```
color_filter.ColorFilters.GRAY [static]
```

Grayscale filter.

6.3.2.4 NEGATIVE

```
color_filter.ColorFilters.NEGATIVE [static]
```

Negative filter.

6.3.2.5 SEPIA

```
color_filter.ColorFilters.SEPIA [static]
```

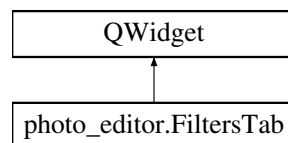
Sepia filter.

The documentation for this class was generated from the following file:

- [color_filter.py](#)

6.4 photo_editor.FiltersTab Class Reference

Inheritance diagram for photo_editor.FiltersTab:



Public Member Functions

- `def __init__(self, parent)`
- `def add_filter_thumb(self, name, title="")`
- `def on_filter_select(self, filter_name, e)`
- `def toggle_thumbs(self)`

Public Attributes

- `parent`
- `main_layout`

6.4.1 Detailed Description

Color filters widget

6.4.2 Constructor & Destructor Documentation

6.4.2.1 `__init__()`

```
def photo_editor.FiltersTab.__init__ (
    self,
    parent )
```

6.4.3 Member Function Documentation

6.4.3.1 `add_filter_thumb()`

```
def photo_editor.FiltersTab.add_filter_thumb (
    self,
    name,
    title = "" )
```

6.4.3.2 `on_filter_select()`

```
def photo_editor.FiltersTab.on_filter_select (
    self,
    filter_name,
    e )
```

6.4.3.3 `toggle_thumbs()`

```
def photo_editor.FiltersTab.toggle_thumbs (
    self )
```

6.4.4 Member Data Documentation

6.4.4.1 `main_layout`

```
photo_editor.FiltersTab.main_layout
```

6.4.4.2 `parent`

`photo_editor.FiltersTab.parent`

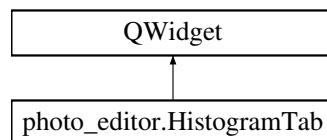
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.5 `photo_editor.HistogramTab` Class Reference

Class for histogram adjustment.

Inheritance diagram for `photo_editor.HistogramTab`:



Public Member Functions

- `def __init__(self, parent)`
- `def reset_sliders(self)`
- `def on_red_slider_released(self)`
- `def on_green_slider_released(self)`
- `def on_blue_slider_released(self)`

Public Attributes

- `parent`
- `red_slider`
- `green_slider`
- `blue_slider`

6.5.1 Detailed Description

Class for histogram adjustment.

This class defines histogram adjustments like redness

Histogram tab widget

6.5.2 Constructor & Destructor Documentation

6.5.2.1 `__init__()`

```
def photo_editor.HistogramTab.__init__ (
    self,
    parent )
```

6.5.3 Member Function Documentation

6.5.3.1 `on_blue_slider_released()`

```
def photo_editor.HistogramTab.on_blue_slider_released (
    self )
```

6.5.3.2 `on_green_slider_released()`

```
def photo_editor.HistogramTab.on_green_slider_released (
    self )
```

6.5.3.3 `on_red_slider_released()`

```
def photo_editor.HistogramTab.on_red_slider_released (
    self )
```

6.5.3.4 `reset_sliders()`

```
def photo_editor.HistogramTab.reset_sliders (
    self )
```

6.5.4 Member Data Documentation

6.5.4.1 `blue_slider`

```
photo_editor.HistogramTab.blue_slider
```

6.5.4.2 green_slider

`photo_editor.HistogramTab.green_slider`

6.5.4.3 parent

`photo_editor.HistogramTab.parent`

6.5.4.4 red_slider

`photo_editor.HistogramTab.red_slider`

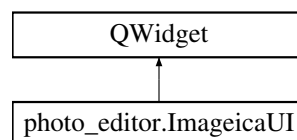
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.6 photo_editor.ImageicaUI Class Reference

Base class.

Inheritance diagram for photo_editor.ImageicaUI:



Public Member Functions

- `def __init__ (self)`
- `def center (self)`
- `def closeEvent (self, event)`
- `def resizeEvent (self, e)`
- `def place_preview_img (self)`
- `def on_save (self)`
- `def on_nothing (self)`
- `def next_image (self)`
- `def previous_image (self)`
- `def on_load (self)`
- `def load_image (self, img_path)`
- `def on_reset (self)`
- `def pixInfo (self)`
- `def photoClicked (self, pos)`

Public Attributes

- [captureMouseClicked](#)
- [image_list](#)
- [name](#)
- [viewer](#)
- [action_tabs](#)
- [file_name](#)
- [path](#)
- [load_btn](#)
- [Next_btn](#)
- [Previous_btn](#)
- [reset_btn](#)
- [save_btn](#)

6.6.1 Detailed Description

Base class.

This class defines the basic UI structure for other components.

Main widget

6.6.2 Constructor & Destructor Documentation

6.6.2.1 `__init__()`

```
def photo_editor.ImageicaUI.__init__ (
    self )
```

6.6.3 Member Function Documentation

6.6.3.1 `center()`

```
def photo_editor.ImageicaUI.center (
    self )
```

align window center

6.6.3.2 closeEvent()

```
def photo_editor.ImageicaUI.closeEvent (
    self,
    event )
```

6.6.3.3 load_image()

```
def photo_editor.ImageicaUI.load_image (
    self,
    img_path )
```

6.6.3.4 next_image()

```
def photo_editor.ImageicaUI.next_image (
    self )
```

6.6.3.5 on_load()

```
def photo_editor.ImageicaUI.on_load (
    self )
```

6.6.3.6 on_nothing()

```
def photo_editor.ImageicaUI.on_nothing (
    self )
```

6.6.3.7 on_reset()

```
def photo_editor.ImageicaUI.on_reset (
    self )
```

6.6.3.8 on_save()

```
def photo_editor.ImageicaUI.on_save (
    self )
```

6.6.3.9 photoClicked()

```
def photo_editor.ImageicaUI.photoClicked (
    self,
    pos )
```

6.6.3.10 pixInfo()

```
def photo_editor.ImageicaUI.pixInfo (
    self )
```

6.6.3.11 place_preview_img()

```
def photo_editor.ImageicaUI.place_preview_img (
    self )
```

6.6.3.12 previous_image()

```
def photo_editor.ImageicaUI.previous_image (
    self )
```

6.6.3.13 resizeEvent()

```
def photo_editor.ImageicaUI.resizeEvent (
    self,
    e )
```

6.6.4 Member Data Documentation

6.6.4.1 action_tabs

```
photo_editor.ImageicaUI.action_tabs
```


6.6.4.2 captureMouseClicked

`photo_editor.ImageicaUI.captureMouseClicked`

6.6.4.3 file_name

`photo_editor.ImageicaUI.file_name`

6.6.4.4 image_list

`photo_editor.ImageicaUI.image_list`

6.6.4.5 load_btn

`photo_editor.ImageicaUI.load_btn`

6.6.4.6 name

`photo_editor.ImageicaUI.name`

6.6.4.7 Next_btn

`photo_editor.ImageicaUI.Next_btn`

6.6.4.8 path

`photo_editor.ImageicaUI.path`

6.6.4.9 Previous_btn

`photo_editor.ImageicaUI.Previous_btn`

6.6.4.10 reset_btn

`photo_editor.ImageicaUI.reset_btn`

6.6.4.11 save_btn

`photo_editor.ImageicaUI.save_btn`

6.6.4.12 viewer

`photo_editor.ImageicaUI.viewer`

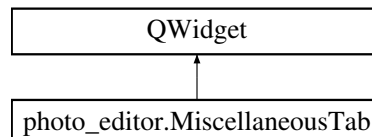
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.7 photo_editor.MiscellaneousTab Class Reference

Class for miscellaneous purposes.

Inheritance diagram for `photo_editor.MiscellaneousTab`:



Public Member Functions

- `def __init__ (self, parent)`
- `def on_colorpop (self)`

Public Attributes

- [parent](#)
- [colorpop_btn](#)

6.7.1 Detailed Description

Class for miscellaneous purposes.

This class defines miscellaeneous features like color pop

6.7.2 Constructor & Destructor Documentation

6.7.2.1 __init__()

```
def photo_editor.MiscellaneousTab.__init__ (
    self,
    parent )
```

6.7.3 Member Function Documentation

6.7.3.1 on_colorpop()

```
def photo_editor.MiscellaneousTab.on_colorpop (
    self )
```

6.7.4 Member Data Documentation

6.7.4.1 colorpop_btn

```
photo_editor.MiscellaneousTab.colorpop_btn
```

6.7.4.2 parent

```
photo_editor.MiscellaneousTab.parent
```

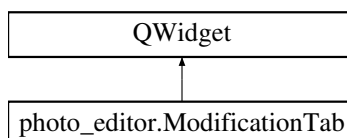
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.8 photo_editor.ModificationTab Class Reference

Class for modifying images.

Inheritance diagram for photo_editor.ModificationTab:



Public Member Functions

- `def __init__ (self, parent)`
- `def set_boxes (self)`
- `def on_width_change (self, e)`
- `def on_height_change (self, e)`
- `def on_ratio_change (self, e)`
- `def on_apply (self, e)`

Public Attributes

- [parent](#)
- [width_lbl](#)
- [height_lbl](#)
- [width_box](#)
- [height_box](#)
- [unit_lbl](#)
- [ratio_check](#)
- [apply_btn](#)

6.8.1 Detailed Description

Class for modifying images.

This class defines modification features like changing dimensions of images

Modification tab widget

6.8.2 Constructor & Destructor Documentation

6.8.2.1 `__init__()`

```
def photo_editor.ModificationTab.__init__ (  
    self,  
    parent )
```

6.8.3 Member Function Documentation

6.8.3.1 `on_apply()`

```
def photo_editor.ModificationTab.on_apply (  
    self,  
    e )
```

6.8.3.2 on_height_change()

```
def photo_editor.ModificationTab.on_height_change (
    self,
    e )
```

6.8.3.3 on_ratio_change()

```
def photo_editor.ModificationTab.on_ratio_change (
    self,
    e )
```

6.8.3.4 on_width_change()

```
def photo_editor.ModificationTab.on_width_change (
    self,
    e )
```

6.8.3.5 set_boxes()

```
def photo_editor.ModificationTab.set_boxes (
    self )
```

6.8.4 Member Data Documentation

6.8.4.1 apply_btn

```
photo_editor.ModificationTab.apply_btn
```

6.8.4.2 height_box

```
photo_editor.ModificationTab.height_box
```

6.8.4.3 height_lbl

`photo_editor.ModificationTab.height_lbl`

6.8.4.4 parent

`photo_editor.ModificationTab.parent`

6.8.4.5 ratio_check

`photo_editor.ModificationTab.ratio_check`

6.8.4.6 unit_lbl

`photo_editor.ModificationTab.unit_lbl`

6.8.4.7 width_box

`photo_editor.ModificationTab.width_box`

6.8.4.8 width_lbl

`photo_editor.ModificationTab.width_lbl`

The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.9 photo_editor.Operations Class Reference

Class for image operations.

Public Member Functions

- `def __init__ (self)`
- `def reset (self)`
- `def has_changes (self)`

Public Attributes

- `color_filter`
- `flip_left`
- `flip_top`
- `rotation_angle`
- `size`
- `brightness`
- `sharpness`
- `contrast`
- `red`
- `green`
- `blue`
- `red_prev`
- `green_prev`
- `blue_prev`

6.9.1 Detailed Description

Class for image ooperations.

This class defines operations on images

6.9.2 Constructor & Destructor Documentation

6.9.2.1 __init__()

```
def photo_editor.Operations.__init__ (  
    self )
```

6.9.3 Member Function Documentation

6.9.3.1 has_changes()

```
def photo_editor.Operations.has_changes (  
    self )
```

6.9.3.2 reset()

```
def photo_editor.Operations.reset (
    self )
```

6.9.4 Member Data Documentation

6.9.4.1 blue

```
photo_editor.Operations.blue
```

6.9.4.2 blue_prev

```
photo_editor.Operations.blue_prev
```

6.9.4.3 brightness

```
photo_editor.Operations.brightness
```

6.9.4.4 color_filter

```
photo_editor.Operations.color_filter
```

6.9.4.5 contrast

```
photo_editor.Operations.contrast
```

6.9.4.6 flip_left

```
photo_editor.Operations.flip_left
```


6.9.4.7 flip_top

`photo_editor.Operations.flip_top`

6.9.4.8 green

`photo_editor.Operations.green`

6.9.4.9 green_prev

`photo_editor.Operations.green_prev`

6.9.4.10 red

`photo_editor.Operations.red`

6.9.4.11 red_prev

`photo_editor.Operations.red_prev`

6.9.4.12 rotation_angle

`photo_editor.Operations.rotation_angle`

6.9.4.13 sharpness

`photo_editor.Operations.sharpness`

6.9.4.14 size

`photo_editor.Operations.size`

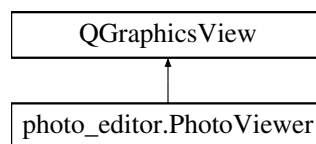
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.10 photo_editor.PhotoViewer Class Reference

Photo display class.

Inheritance diagram for `photo_editor.PhotoViewer`:



Public Member Functions

- `def __init__(self, parent)`
- `def hasPhoto(self)`
- `def fitInView(self, scale=True)`
- `def setPhoto(self, pixmap=None)`
- `def wheelEvent(self, event)`
- `def toggleDragMode(self)`
- `def mousePressEvent(self, event)`

Public Attributes

- `parent`

Static Public Attributes

- `photoClicked = QtCore.pyqtSignal(QtCore.QPoint)`

6.10.1 Detailed Description

Photo display class.

This class defines the environment for the display of the image

6.10.2 Constructor & Destructor Documentation

6.10.2.1 `__init__()`

```
def photo_editor.PhotoViewer.__init__ (
    self,
    parent )
```

6.10.3 Member Function Documentation

6.10.3.1 `fitInView()`

```
def photo_editor.PhotoViewer.fitInView (
    self,
    scale = True )
```

6.10.3.2 `hasPhoto()`

```
def photo_editor.PhotoViewer.hasPhoto (
    self )
```

6.10.3.3 `mousePressEvent()`

```
def photo_editor.PhotoViewer.mousePressEvent (
    self,
    event )
```

6.10.3.4 `setPhoto()`

```
def photo_editor.PhotoViewer.setPhoto (
    self,
    pixmap = None )
```

6.10.3.5 `toggleDragMode()`

```
def photo_editor.PhotoViewer.toggleDragMode (
    self )
```

6.10.3.6 wheelEvent()

```
def photo_editor.PhotoViewer.wheelEvent (
    self,
    event )
```

6.10.4 Member Data Documentation

6.10.4.1 parent

```
photo_editor.PhotoViewer.parent
```

6.10.4.2 photoClicked

```
photo_editor.PhotoViewer.photoClicked = QtCore.pyqtSignal (QtCore.QPoint) [static]
```

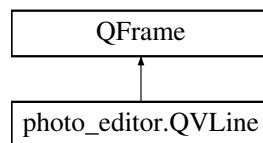
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.11 photo_editor.QVLine Class Reference

Add vertical line to UI.

Inheritance diagram for photo_editor.QVLine:



Public Member Functions

- def [__init__](#) (self)

6.11.1 Detailed Description

Add vertical line to UI.

```
Vertical line
```

6.11.2 Constructor & Destructor Documentation

6.11.2.1 `__init__()`

```
def photo_editor.QVLine.__init__ (
    self )
```

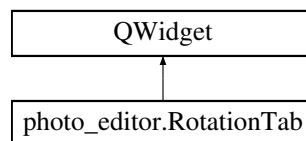
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.12 photo_editor.RotationTab Class Reference

Class for adjustment features.

Inheritance diagram for photo_editor.RotationTab:



Public Member Functions

- `def __init__ (self, parent)`
- `def on_rotate_left (self)`
- `def on_rotate_right (self)`
- `def on_flip_left (self)`
- `def on_flip_top (self)`

Public Attributes

- `parent`

6.12.1 Detailed Description

Class for adjustment features.

This class defines adjustment features like contrast

Rotation tab widget

6.12.2 Constructor & Destructor Documentation

6.12.2.1 `__init__()`

```
def photo_editor.RotationTab.__init__ (
    self,
    parent )
```

6.12.3 Member Function Documentation

6.12.3.1 `on_flip_left()`

```
def photo_editor.RotationTab.on_flip_left (
    self )
```

6.12.3.2 `on_flip_top()`

```
def photo_editor.RotationTab.on_flip_top (
    self )
```

6.12.3.3 `on_rotate_left()`

```
def photo_editor.RotationTab.on_rotate_left (
    self )
```

6.12.3.4 `on_rotate_right()`

```
def photo_editor.RotationTab.on_rotate_right (
    self )
```

6.12.4 Member Data Documentation

6.12.4.1 parent

`photo_editor.RotationTab.parent`

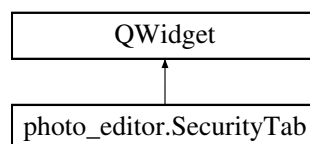
The documentation for this class was generated from the following file:

- [photo_editor.py](#)

6.13 photo_editor.SecurityTab Class Reference

Class for security features.

Inheritance diagram for `photo_editor.SecurityTab`:



Public Member Functions

- `def __init__(self, parent)`
- `def encrypt(self)`
- `def decrypt(self)`

Public Attributes

- `parent`
- `encryption_btn`
- `decryption_btn`
- `textbox1`
- `textbox2`

6.13.1 Detailed Description

Class for security features.

This class defines security features like encryption and decryption

6.13.2 Constructor & Destructor Documentation

6.13.2.1 `__init__()`

```
def photo_editor.SecurityTab.__init__ (
    self,
    parent )
```

6.13.3 Member Function Documentation

6.13.3.1 `decrypt()`

```
def photo_editor.SecurityTab.decrypt (
    self )
```

6.13.3.2 `encrypt()`

```
def photo_editor.SecurityTab.encrypt (
    self )
```

6.13.4 Member Data Documentation

6.13.4.1 `decryption_btn`

```
photo_editor.SecurityTab.decryption_btn
```

6.13.4.2 `encryption_btn`

```
photo_editor.SecurityTab.encryption_btn
```

6.13.4.3 `parent`

```
photo_editor.SecurityTab.parent
```

6.13.4.4 `textbox1`

```
photo_editor.SecurityTab.textbox1
```

6.13.4.5 `textbox2`

```
photo_editor.SecurityTab.textbox2
```

The documentation for this class was generated from the following file:

- [photo_editor.py](#)

Chapter 7

File Documentation

7.1 color_filter.py File Reference

Classes

- class [color_filter.ColorFilters](#)
Choice of filters to use.

Namespaces

- [color_filter](#)

Functions

- def [color_filter.sepia](#) (img)
Apply Sepia filter.
- def [color_filter.black_white](#) (img)
Apply Black and White filter.
- def [color_filter.negative](#) (img)
Apply Negative filter.
- def [color_filter.gray](#) (img)
Apply Greyscale filter.
- def [color_filter.color_filter](#) (img, filter_name)
Apply a filter.

Variables

- [color_filter.logger](#)
Contains logging information.

7.2 `img_helper.py` File Reference

Namespaces

- `img_helper`

Functions

- def `img_helper.get_img` (path)
Retreive image.
- def `img_helper.resize` (img, width, height)
Resize image.
- def `img_helper.rotate` (img, angle)
Rotate image.
- def `img_helper.color_filter` (img, filter_name)
Apply a filter.
- def `img_helper.brightness` (img, factor)
Adjust brightness of image.
- def `img_helper.contrast` (img, factor)
Adjust contrast of image.
- def `img_helper.sharpness` (img, factor)
Adjust sharpness of image.
- def `img_helper.flip_left` (img)
Flip image.
- def `img_helper.flip_top` (img)
Flip image.
- def `img_helper.save` (img, path)
Save image.
- def `img_helper.open_img` (img)
Retreive image.
- def `img_helper.hist_red` (img, ratio, ratio_prev)
Adjust red histogram of image.
- def `img_helper.hist_green` (img, ratio, ratio_prev)
Adjust green histogram of image.
- def `img_helper.hist_blue` (img, ratio, ratio_prev)
Adjust blue histogram of image.

Variables

- `img_helper.logger` = `logging.getLogger()`
Logger Function.
- float `img_helper.CONTRAST_FACTOR_MAX`
Maximum contrast factor.
- float `img_helper.CONTRAST_FACTOR_MIN`
Minimun contrast factor.
- int `img_helper.SHARPNESS_FACTOR_MAX`
Maximum sharpness factor.
- int `img_helper.SHARPNESS_FACTOR_MIN`
Minimum sharpness factor.

- float [img_helper.BRIGHTNESS_FACTOR_MAX](#)
Maximum brightness factor.
- float [img_helper.BRIGHTNESS_FACTOR_MIN](#)
Minimum brightness factor.
- int [img_helper.HIST_FACTOR_MAX](#)
Maximum histogram factor.
- float [img_helper.HIST_FACTOR_MIN](#)
Minimum histogram factor.

7.3 photo_editor.py File Reference

Classes

- class [photo_editor.Operations](#)
Class for image operations.
- class [photo_editor.ActionTabs](#)
Class for layout.
- class [photo_editor.RotationTab](#)
Class for adjustment features.
- class [photo_editor.ModificationTab](#)
Class for modifying images.
- class [photo_editor.AdjustingTab](#)
Class for adjustment features.
- class [photo_editor.HistogramTab](#)
Class for histogram adjustment.
- class [photo_editor.FiltersTab](#)
- class [photo_editor.SecurityTab](#)
Class for security features.
- class [photo_editor.MiscellaneousTab](#)
Class for miscellaneous purposes.
- class [photo_editor.PhotoViewer](#)
Photo display class.
- class [photo_editor.ImageicaUI](#)
Base class.
- class [photo_editor.QVLine](#)
Add vertical line to UI.

Namespaces

- [photo_editor](#)

Functions

- def [photo_editor.create_button](#) (name, minWidth, connectFunction, enablestatus, stylesheet)
- def [photo_editor.create_slider](#) (obj, connectFunction)

Variables

- `photo_editor.logger` = `logging.getLogger()`
- `string photo_editor.THUMB_BORDER_COLOR_ACTIVE` = `"#3893F4"`
- `string photo_editor.THUMB_BORDER_COLOR` = `"#ccc"`
- `int photo_editor.BTN_MIN_WIDTH` = `120`
- `tuple photo_editor.ROTATION_BTN_SIZE` = `(70, 30)`
- `int photo_editor.THUMB_SIZE` = `120`
- `int photo_editor.SLIDER_MIN_VAL` = `-99`
- `int photo_editor.SLIDER_MAX_VAL` = `100`
- `int photo_editor.SLIDER_DEF_VAL` = `0`
- `photo_editor.operations` = `Operations()`
- `photo_editor.app` = `QApplication(sys.argv)`
- `photo_editor.win` = `ImageicaUI()`

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