

FrameLabelingApplication (FLA)

Classes:

- FileHandler
- ImageHandler (Abstract)
 - o JPEGHandler
 - o PNGHandler
 - o ... (more formats)
- VideoHandler (Abstract)
 - o MP4Handler
 - o AVIHandler
 - o ... (more formats)
- LabelLayer (Abstract)
 - o RectangleLayer
 - o PolygonLayer
 - o ImageClassLayer
 - o SkeletonLayer
- OutputHandler (Abstract)
 - o CSVHandler
 - o YAMLHandler
 - o JSONHandler
 - o LabelFormatHandler
- Frame
- FrameDisplayer

Description of classes

ImageHandler (Abstract)

- Inherits from FileHandler
- This is an abstract class that helps the application to load and save images

JPEGHandler

- Inherits from ImageHandler
- Is used for loading and saving .jpeg/.jpg images

PNGHandler

- Inherits from ImageHandler
- Is used for loading and saving .png images

VideoHandler (Abstract)

- Inherits from FileHandler
- This is an abstract class that helps the application to load and save videos

MP4Handler

- Inherits from VideoHandler
- Is used for loading and saving .mp4 images

AVIHandler

- Inherits from VideoHandler
- Is used for loading and saving .PNG/.PNG images

LabelLayer (Abstract)

- The abstract representation of layers that will be shown to the user (A frame can contain various layers/labels)

RectangleLayer

- Inherits from Label Layer
- The layer for labeling Rectangular boxes (for object detection)
- Top Left coordinate of box will be kept, but internal conversions will be possible too.

PolygonLayer

- Inherits from Label Layer
- The layer for labeling Polygons (for image segmentation)
- Array of points + segmented image as output when saved

ImageClassLayer

- Inherits from Label Layer
- The layer for image classification info (text or one hot encoded label)

SkeletonLayer

- Inherits from Label Layer
- Gets skeleton scheme(order) and keeps in track of each point

OutputHandler (Abstract)

- An abstract class for handling saving results

CSVHandler

- Inherits from OutputHandler
- Helps to save and load CSV formatted labels

YAMLHandler

- Inherits from OutputHandler
- Helps to save and load YAMLHandler formatted labels

JSONHandler

- Inherits from OutputHandler
- Helps to save and load JSONHandler formatted labels

LabelFormatHandler

- Inherits from OutputHandler
- Helps to save and load LabelFormatHandler formatted labels

Frame

- A Class for storing a frame/image and other relevant information
- The image and video loaders will use this class for each frame

FrameDisplayer

- A class for displaying a frame/image and other relevant information