Code Review 2 (SRC)

## Data.py

* Line 9-20: Importing labels from data set.
  1. Line 14-20: Reading dataset and separating labels of the data and appending each label in a vector to be returned.
* Line 23-32: Converting a given vector into a known order.
* Line 35-67: Generating an output vector corresponding to the given video clips.
  1. Line 44-53: Attaches label to specifically labelled time durations.
  2. Line 55-67: Appends the outputs of each clip to a vector and returns it.
* Line 70-110: Defines a class of video generation functions.
  1. Line 71-80: Stores the video specifications in the video generation class.
  2. Line 80-86: Returns a pointer of the current video clip.
  3. Line 88-106: Creating the required variables based off the received video data/information. (the video array, frame count, number of instances).
  4. Line 108,109: Iterates to next video clip.

## Io\_data.py

* Line 4-74: Converts a given video into an array.
  1. Line 29-35: Importing the standard frame count from OpenCV based on the installed version.
  2. Line 37-58: Performing exception testing on given video specifications.
  3. Line 60-74: Resizes all the frames in the video and puts them into an array.
* Line 77-89: Returns the number of frames for a given video path.
* Line 92-108: Returns the duration of a given video by dividing the number of frames by the fps cap.

## Processing.py

* Line 4-11: Returns a classification from the classification probability and gives a score based on the probability divided by the sum.
* Line 14-26: Returns a smoothed mean of the input vector using the numpy mean function.
* Line 29-58: Performs activity localization and returns the activity details.
  1. Line 32-45: Labels some useful activity variables including classifications, probability, start time and end time.
  2. Line 47-57: Performs the analysis process for all video segments in the given video.

## Visualize.py

* Line 10-40: Retrieves txt data compared to the training data and plots them against each other.
  1. Line 11-14: Retrieving values from the text document.
  2. Line 16-19: Retrieves the corresponding values from the training data
  3. Line 21-40: Plots and labels these data points against each other for comparison
* Line 43-68: Visualising and plotting the temporal activities.
  1. Line 44-52: Loading predictions and variables.
  2. Line 53-68: Plotting the actions on a plotting with a colour grading scale according to the probability and actions performed.
* Line 70-115: Comparing different temporal activities.
  1. Line 71-81: Storing the instances to be plotted against each other.
  2. Line 84-93: Plotting the instances with different colour values to differentiate them from one another.
  3. Line 97-115: Labelling and configuring the plot to help extraction of information