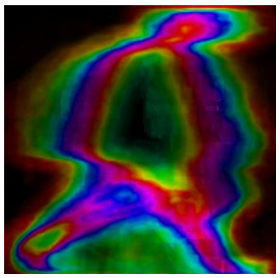
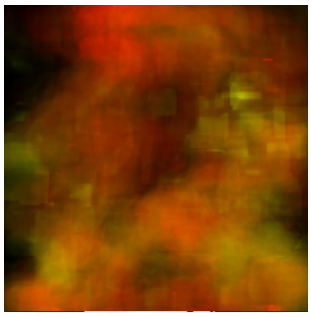
Gait Analysis-Workflow

Link-Gait_analysis

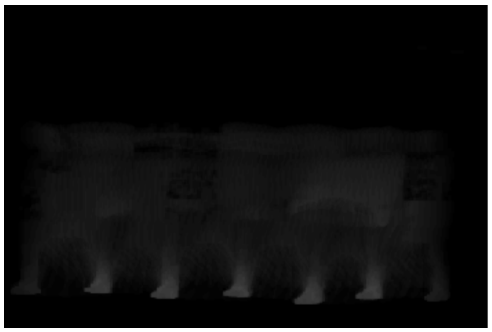
- Trained CNN model for optical flow merged with cropped average image. Got accuracy of **98.75%**
  Link-cnn_opfl_hsv
- Trained CNN model for cropped average image. Got accuracy of **70%.**
  Link-cnn_avg_image
- Trained CNN model for optical flow. Got accuracy of **82.5%**.
  Link-cnn_opfl
- Sorted the dataset into folders for training the model.
- Found the merged optical flow with cropped average image and saved the result obtained



- Trained the ANN model with extracted features. Got accuracy of **94%**
  Link-ann_model
- Extracted the features using tsfresh library for the dataset using the time series of head, torso, and leg (x,y) coordinates.
- Found the optical flow of the video both (grayscale and hsv) using cropped (bounding box) images.
-  
- Found the centroid of each head, torso, and leg image which we will use as coordinates for the time series.
- Cropped the head, torso, and leg of each image for the complete dataset.

- Computed the average cropped image of the complete video.

- Computed the average full image of the complete video



- Cropped the image (bounding box) using the largest contour detection if more than one contours were found.