A dataset is given which contains in total 1269 images in a folder named “images”. It also contains a “labels.csv” file in which the image file names and their corresponding target labels are given in two separate columns.

**Dataset:**

1. Images (1269 images)
2. labels.csv (3 labels - running, sitting, sleeping)

[Link to dataset](https://drive.google.com/drive/folders/1bjjf81XrGq5tNXQ_w1OcJQgQ8c1d3d6k?usp=sharing)

**Task:**

1. The task is to pass every image to a pose detection library (openpose or mmpose or yolov7), extract the body keypoints and finally write each image’s keypoints to a csv (unbalanced\_keypoints.csv) with the exact label (from labels.csv).
2. As the dataset is imbalanced, it might cause low generalization in training. The task is making another csv file (balanced\_keypoints.csv) by balancing the generated data (unbalanced\_keypoints.csv) from Task 1 by using relevant techniques such as upsampling, downsampling etc (SMOTE can be a useful tool).

You have to provide the codes and two generated csv files:

1. unbalanced\_keypoints.csv,
2. Balanced\_keypoints.csv