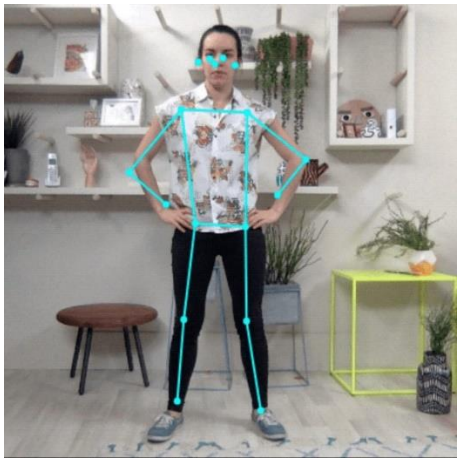
Human Fall Detection

Week 02 (Due on 18th June):

1. Install TensorFlow-GPU (install tensoflow cpu, if GPU not present), SciPy, pyyaml, python in conda environment (use conda install).
2. Install OpenCV-python (Use pip install for this. Do not use conda install opencv)
3. Read about PoseNet, how it captures and plots body skeleton points. Explore deep about the specific skeletal points that you think might be useful to classify whether a man is standing or falling.
4. Clone the PoseNet repository on your local PC and mark the skeleton points of body on live feed (camera).
   Repository Link: https://github.com/rwightman/posenet-python
   At the end of this assignment, you should get this as an output.



5. The dataset created prior to this week was supposed to be user-made. Upload the videos you made on the Drive (Link given below). Rename your video file as firstname_lastname_nameOfActionPerformed. DON'T CREATE A SEPARATE FOLDER.
   After every member uploads their videos, we will use all these videos to train our model in the next week.
   Drive Link: - https://drive.google.com/drive/folders/1DnsNFrOfOvblTB_kWq3FP-dLEhIZnsWX?usp=sharing

Optional Approach (Using JavaScript):

Human Fall detection can also be performed in JavaScript using Tensorflowjs.

- To perform Machine Learning using JavaScript, you can use ML5js library.
- If one is unable/ having any issues in python can go for this approach.
- Try to read how to plot skeletal points in JavaScript using PoseNet.

Reference - https://ml5js.org/reference/api-PoseNet/