A multi person video tracker should fulfill two properties, it must be able to detect every person as precisely as possible as well as keeping a consistent identification of the people through frames. Here, we present a fully automated method for person tracking in video of a mingling event, first of all we perform the person detection in the video with the OpenPose tool. Once we have that, we perform the tracking between different frames and we linearly interpolate gaps in which the people have been missing for a short period of time.

Once we have the path that each person has followed through the video, the following step is to extract the movement of the person computing the Optical Flow for his bounding boxes through all the frames obtaining an array that characterizes the movement for that person in that video. With this magnitude arrays and the acceleration arrays collected from the wearables that the people wore in the mingling event, we perform an association such that we try to match every person in the video with every wearable device in a fully automated way.