Skeleton2Point: Recognizing Skeleton-Based Actions As Point Clouds(Supplementary Material)

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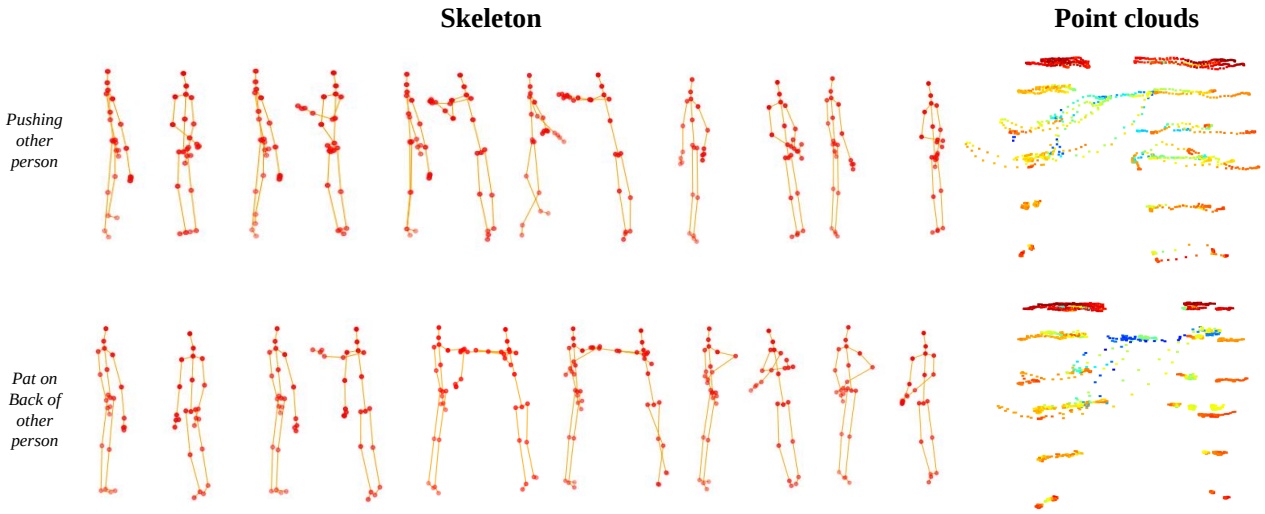

Figure 1: Visualization of different actions (two persons) in the forms of skeleton and point clouds.

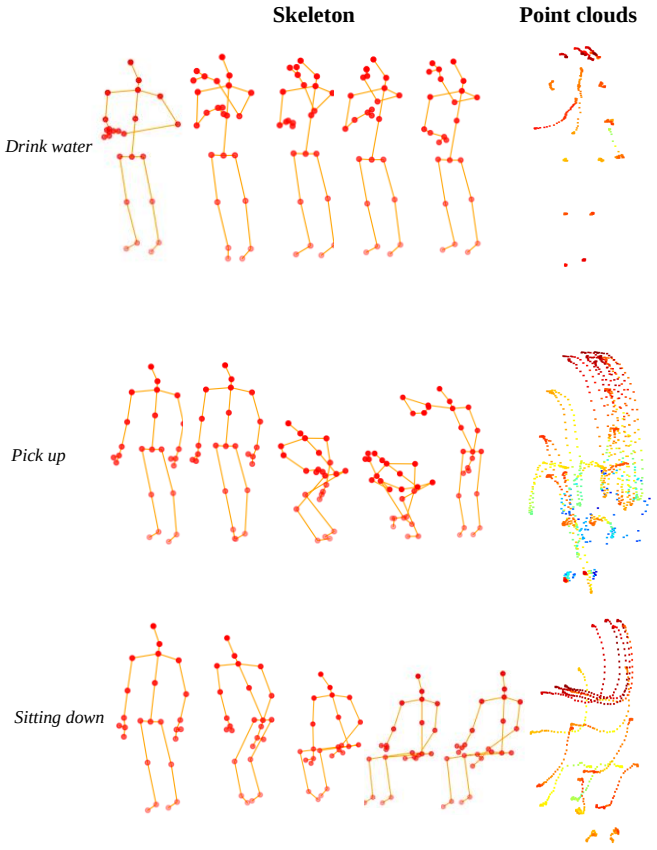

Figure 2: Visualization of different actions (single person) in the forms of skeleton and point clouds.

Visualization. We first visualize different actions in the forms of skeleton and point clouds in Fig 1 and Fig 2. The different actions include single person actions like drink water, pick up, sitting down and two persons actions like pushing other person, pat on the back of other person. As for the visualization methods, we use matplotlib-3d for skeleton and open3d for point clouds.

Then, we visualize the down sample process during the point cloud learner extracting the spatial information of point clouds in Fig 3. It could be seen that the point clouds become less redundant and the key points containing information special to the action are still remained.

Discussion. Despite the excellent performance of our proposed Skeleton2Point on the NTU-RGB+D datasets, how to extract temporal information better after the skeleton is transformed into point clouds remains to be explored. We will concentrate on it in our future work.

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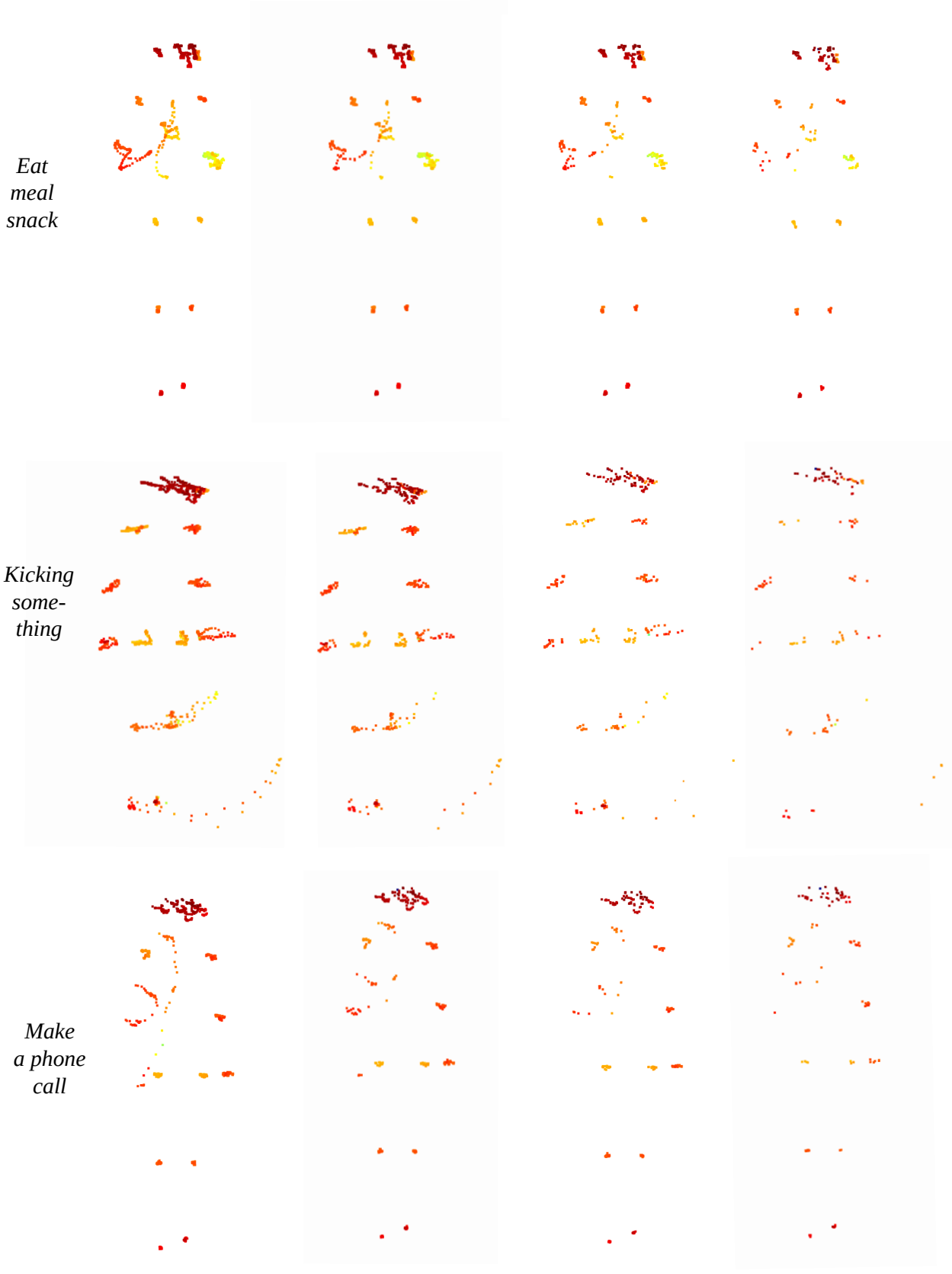

Figure 3: Visualization of point clouds during the down sample process.