Microsoft Word Author Guidelines for CVPR Proceedings

PoseFlow: A Deep Motion Representation for Understanding Human Behaviors in Videos (Supplementary Metarial)

Paper ID 3170

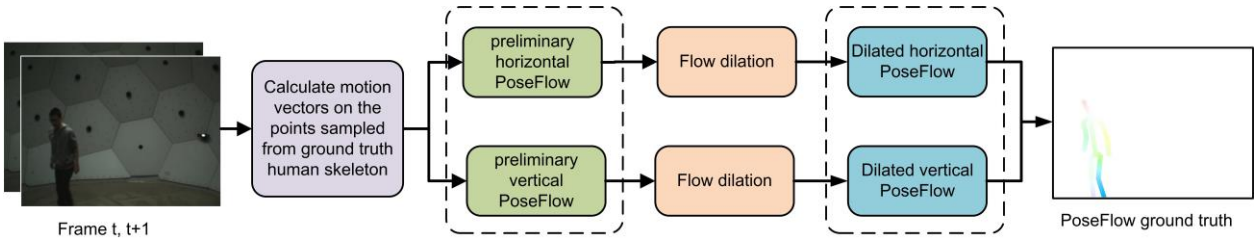

Figure 1. The flowchart of the procedure to generate the ground truth PoseFlow.

Abstract

This is the supplementary material for the paper entitled "PoseFlow: A Deep Motion Representation for Understanding Human Behaviors in Videos". In this material, we describe the detailed processes to generate the ground truth PoseFlow fields.

1. Ground Truth PoseFlow Generation

The flowchart of the procedure to generate the ground truth PoseFlow is shown in Fig. 1. Given the adjacent two video frames together with the corresponding ground truth human annotations. Such human annotations are actually the 2D joint locations in each video frame. We then connect the annotated joints belonging to the same bone by using straight lines. Afterwards, we uniformly sample 10 pixels on each straight line and calculate motion vectors at the sampled pixels. The amplitudes of the computed motion vectors forms the preliminary PoseFlow. Then, we split it into the preliminary horizontal PoseFlow and preliminary vertical PoseFlow. After implementing the Flow dilation process (see Fig. 2) on the preliminary horizontal PoseFlow and preliminary vertical PoseFlow, we obtain the dilated horizontal PoseFlow and the dilated vertical PoseFlow. Finally, the ground truth PoseFlow is obtained by combing the dilated horizontal PoseFlow and the dilated vertical PoseFlow.

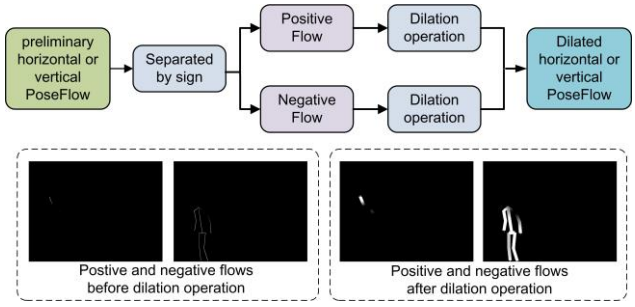

Figure 2. The flowchart of the flow dilation process. An example is also shown to illustrate the difference between the PoseFlow before and after the dilation operation.