Learning Content and Style: Joint Action Recognition and Person Identification from Human Skeletons

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Highlights

- We are the first to pair action recognition and person identification inspired by the fact that our visual system can simultaneously recognize content and style from biological motions.
- We propose a new end-to-end trainable pipeline, which consists of skeleton transformation and multi-task RNN.
- We propose multi-task RNN with different amounts of sharing layers as well as a novel architecture that learns the joint probability between the two output variables.
- We obtain state-of-the-art results in skeleton based action recognition. Experiments show that for these two tasks, learning one task would benefit from learning another task.