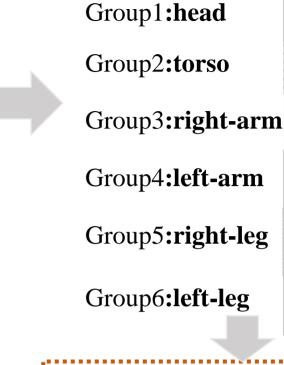
Unknown activity pose estimation

3D pose estimation and joint tracking



Left arm:
shoulder abduction
elbow extension

Head: rise

Right arm: shoulder abduction elbow extension Head: turn bottom

Left leg: knee flexion;

Head:lean forward

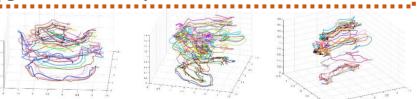
Left arm: shoulder abduction elbow extension Torso: bend forward

New Bayes non-parametric models are generated to recognize the primitives in video sequences.

The *N* discovered primitive classes are labelled basing on inner class similarity by biomechanics terms of body motion.

Collect unknown segments and discover similar motion primitives with non-parametric Bayes mixtures

Joints motion flux and segmentation



Discovered unknown primitives attributed to classes specified by estimated number N of mixture parameters $\Theta_1, \dots, \Theta_N$