pose descriptor extraction

kinect

$(x_1, \cdots, x_{15})$

$(\theta_1, \varphi_1, \cdots, \theta_9, \varphi_9, \eta)$
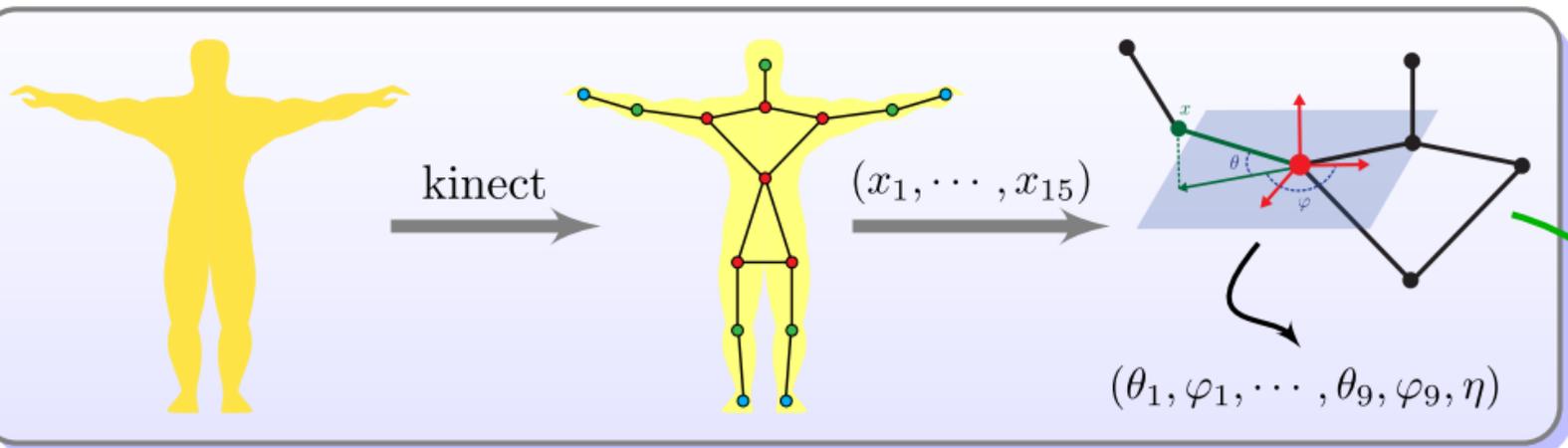
key pose learning machine

training set

multi-class SVM

key pose
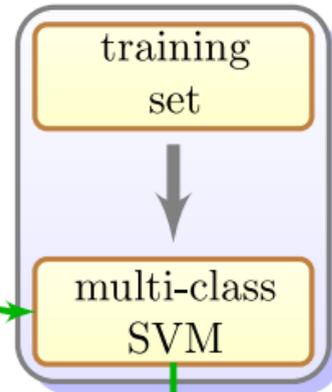
gesture learning machine

training set

k_1
k_2
k_3 k_4
g_1 k_5
g_3

k_6
k_4
g_2

k_3
k_6 k_4 k_5
k_4 k_3 k_1
g_4 g_5 g_2

decision forest

gesture

queue

(k_1, t_1) (k_2, t_2) $\cdots$ (k_n, t_n)