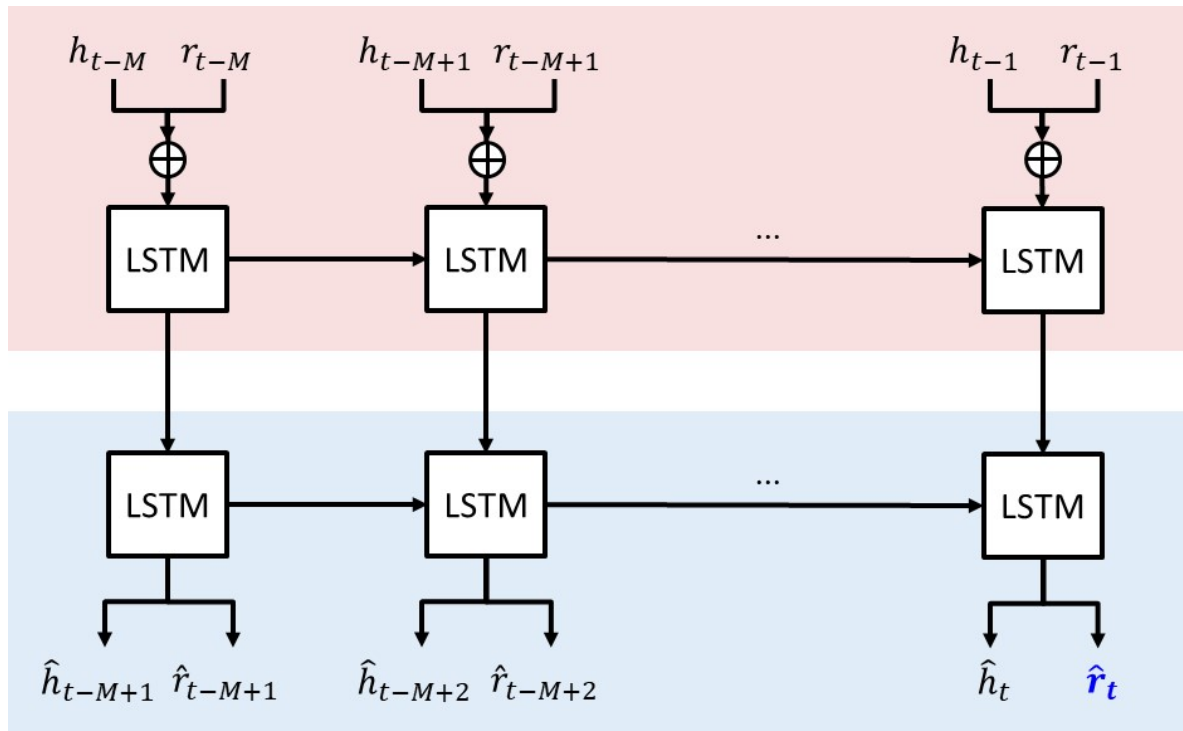# End-to-End Learning-based Interaction Behavior Generation

- Project AIR (Artificial Intelligence for Robots), ETRI, Korea
- Objective: adapt and react quickly to human behaviors
- Used LSTMs (long short-term memory units)
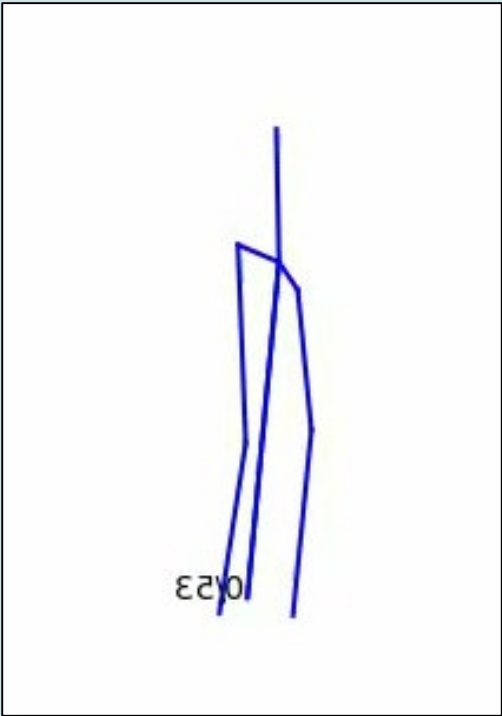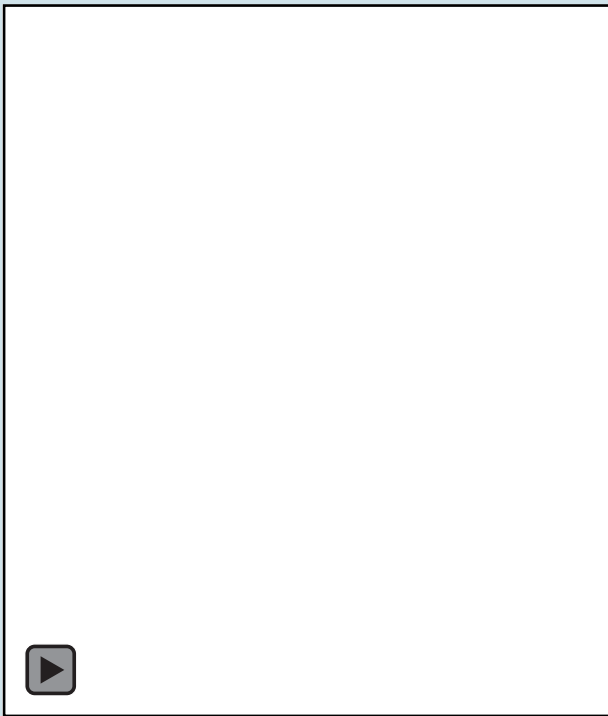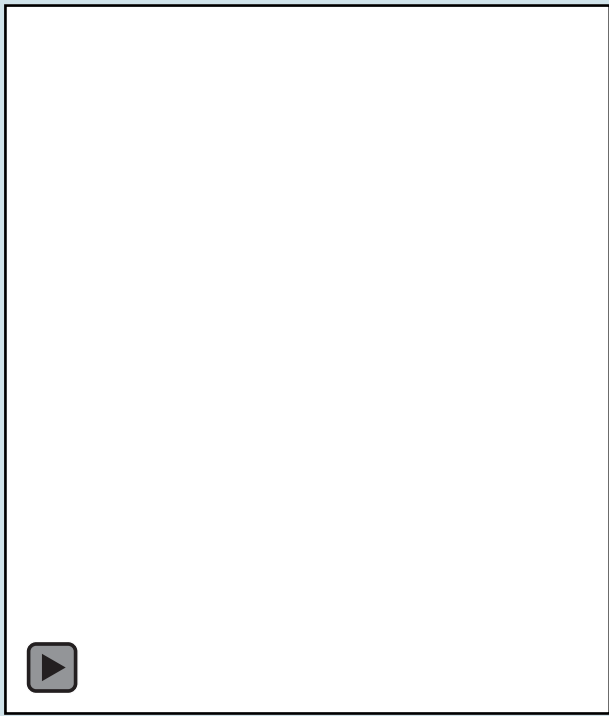 - trained with NTU action recognition dataset

h_t: observed human joint angles

r_t: observed robot joint angles

$\hat{h}_t$: predicted human joint angles
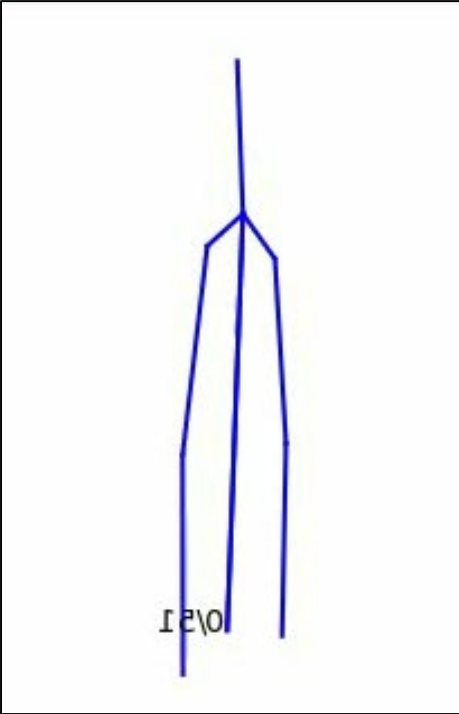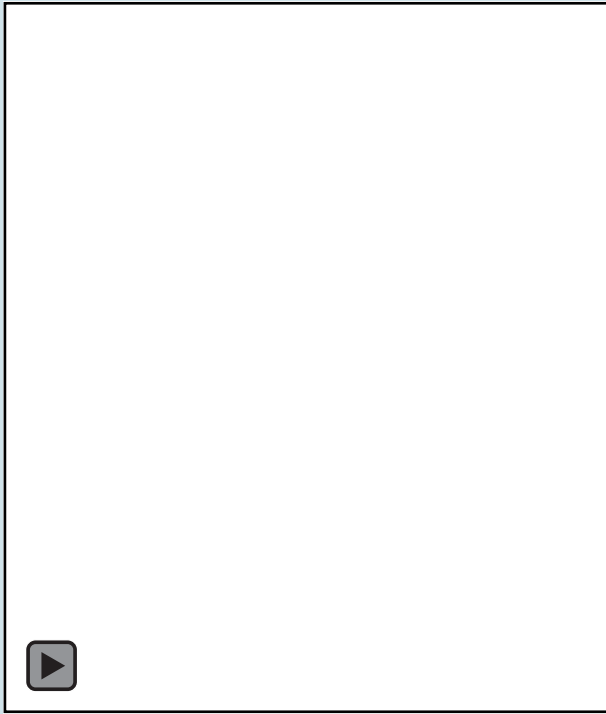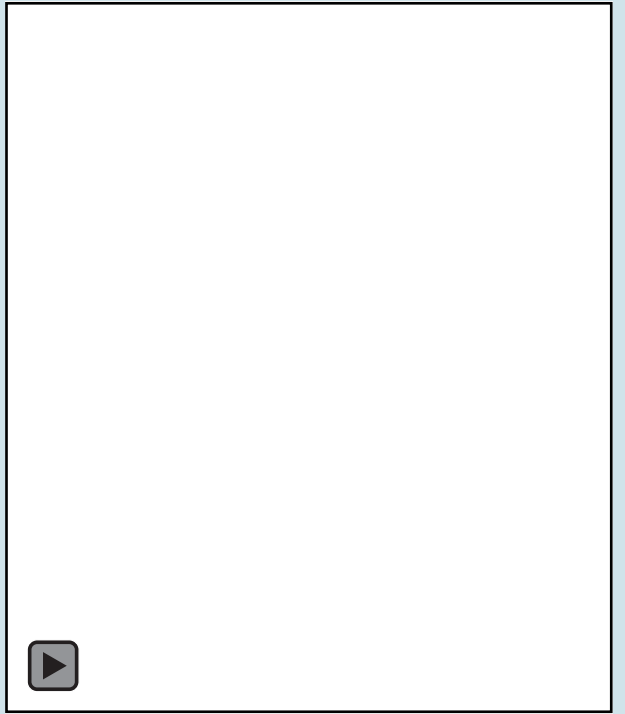
$\hat{r}_t$: predicted robot joint angles

< Deep neural network of interaction behavior generator >

End–to–End Learning–based Interaction Behavior Generation

- Experiment 1) when a human reaches out to the robot

Ground Truth		Generation
Human behavior	Robot behavior	Robot behavior

End-to-End Learning-based Interaction Behavior Generation

- Experiment 2) when a human points to the robot

Ground Truth		Generation
Human behavior	Robot behavior	Robot behavior