

## Research on Cognitive Developmental Robotics



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Recently, studies on creating robots based on human development (known as cognitive developmental robotics) has been gaining much attention. We specifically focus on robot's knowledge/behavior acquisition based on active sensing experiences (children's toy playing) and interaction with humans (parent/infant interaction).

We utilize neural networks, which are simplified models of the brain, for robot's training model. Robot's behaviors are trained using a recurrent neural network. We have worked on creating robots based on affordance theory, creating robot's tool-body assimilation model, and human/robot drawing imitation using a developmental training model. The focus of our research is acquisition of robot's knowledge/behavior through a bottom-up approach based on primary stages of human development.

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