Character Controllers using Motion VAEs

Hung Yu Ling[1], Fabio Zinno[2], George Cheng[2], Michiel van de Panne[1]

[1]University of British Columbia [2]Electronic Arts Vancouver

How to use reinforcement learning for kinematic animation?

Try out the web-based demo at the QR code above, or find our paper at *cs.ubc.ca/~hyuling/projects/mvae*.

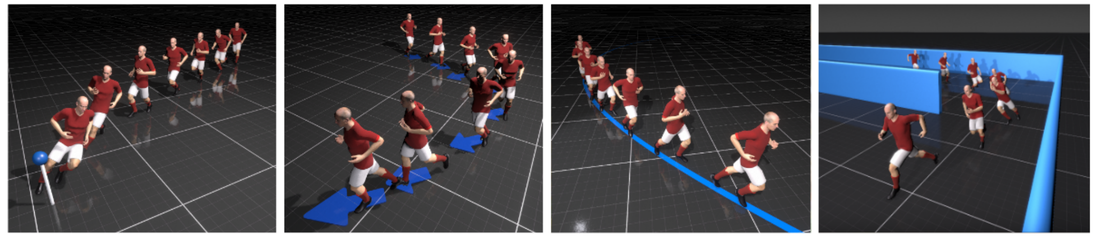
Benefits of Reinforcement Learning

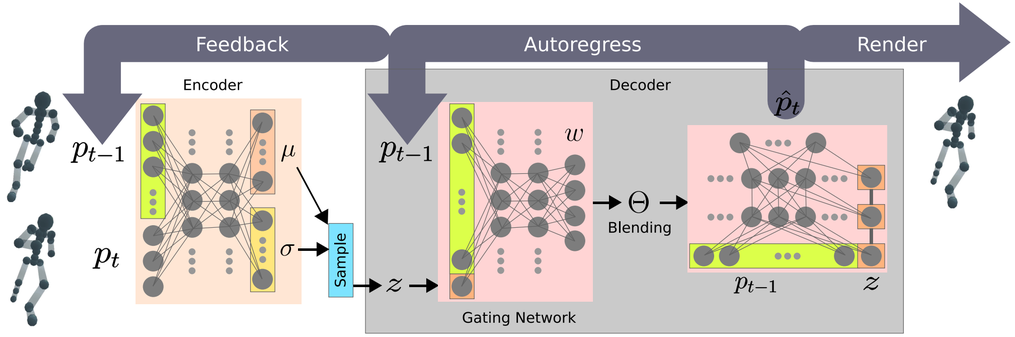
1. One motion model supports multiple tasks
2. Better task performance with model-then-control

What happens when you ask a neural network to turn right, when it has only been trained on left turns.

Motion VAE Framework

1. Mixture model encodes possible future states
2. Train controllers on top of Motion VAEs using RL





Hung Yu Ling, Fabio Zinno, George Cheng, and Michiel van de Panne. Character Controllers using Motion VAEs. SIGGRAPH 2020.