Ethan Fetaya
University of Toronto

Neural Relational Inference for Interacting Systems

Abstract:

Interacting systems are prevalent in nature, from dynamical systems in physics to complex societal dynamics. In this talk I will introduce our neural relational inference model: an unsupervised model that learns to infer interactions while simultaneously learning the dynamics purely from observational data. Our model takes the form of a variational auto-encoder, in which the latent code represents the underlying interaction graph and the reconstruction is based on graph neural networks.