Off-policy Evaluation for MDPs with Unknown Structure

Abstract:
In this talk I will present my work from ICML 2015. First, I will give a general introduction to Reinforcement Learning setup and define the off-policy evaluation problem and its core difficulties. I will present the model based solution for off-policy evaluation, and explain when structure can be exploited to improve performance of such solution. This will lead us to the core of our algorithm - the much more general problem of structure learning. The paper suggests solving this problem greedily and give conditions as to when such a solution works. Finally, I will present a few empirical results demonstrating our result.