Questions 04-09-2018

Near Optimal Behavior via Approximate State Abstraction:

This article discusses using approximate state abstraction to achieve near optimal behavior in Markov Decision Processes and Reinforcement Learning. It presents a technique and provides evidence that using approximations within optimal value functions and policies can yield near optimal behavior and has several benefits including being able to learn abstraction criteria without having to solve full MDP, being able to tune this abstraction aggressiveness, and achieving better degrees of compression. How can we relate this back to autonomic cyber security? Can we use this knowledge to implement reinforcement learning with approximate state abstraction in specific tasks, such as intrusion detection or prevention in an efficient and effective manner?