

Topic: Machine Learning

Faculty Name: Prof. Balaraman Ravindran

Department: Computer Science Engineering, IITM

Relevant Semester: Nil

Relevant Course : Machine Learning

Pre-Requisite : Nil

Course Description & Outline :

Reinforcement Learning

- Introduction to the reinforcement learning problem; Elements of reinforcement learning; Immediate Reinforcement Learning: N-Armed Bandit
- Dynamic Programming based approaches: Value Iteration, Policy Iteration.
- Temporal Difference Learning: TD learning, Q learning and SARSA; Exploration Strategies; A brief introduction to Eligibility Traces and TD(λ)
- Generalization: Linear function approximation
- Policy search based methods: REINFORCE and extensions.
- Partially Observable Problems: A brief introduction. RL and Deep Learning.