CSC_52081_EP (P2) Reinforcement Learning and Autonomous Agents

Autonomous Agents via **Reinforcement Learning**, Imitation Learning, sequence modelling (Decision Transformers, . . .), gradient-free optimisation (evolutionary methods, . . .), Monte Carlo Tree Search

RL Algorithms: Deep Q-Learning, Policy Gradient and Actor Critic methods

Other Topics: Inverse RL, offline-RL, model-based RL, distributional RL, agent safety, transfer, . . .

An emphasis on Architectures and Representations (**Deep RL**), real-world considerations (formulating problems, implementation and application, scaling up), . . . ; RL as Probabilistic Inference

Eval.: Lab assignments and Challenge, Team Project

An autonomous agent takes actions to achieve goals, via interaction, without human intervention

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