ULiège
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INFO8003-1
Optimal decision making
for complex problems
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Examination

Theoretical examination

1 QUESTIONS

- What is an intelligent agent? Give at least two applications of intelligent agents in the real life.

- What is the definition of Reinforcement Learning? How does it relate to Machine Learning?

- What are the main assumptions in Reinforcement Learning?

- What is safe exploration ? What can make it so difficult?

- Characterize the RL problem adopted in Assignment 1.

- What is a policy? A stationary policy? An optimal policy? Can we only consider stationary policies to find an optimal one? Justify your answer.

- Define the recurrence equation of J and Q for a given policy. Why can the recurrence equations stop after a few iterations? Provide bounds.

- Describe the MDP structure derived from system dynamics and reward function. How to compute Q-functions with these components?