

# Project 4

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## Instructions

Choose a task that is suitable for application of Reinforcement Learning (RL) methods. Formulate the problem as a Markov Decision Process (MDP) and choose a relevant RL method to analyze and solve the chosen task. You should work in groups of 2 students, unless you are participating as a PhD in which case you should work individually. Be aware of the complexity of the project. Start small and increase complexity as you go.

## Guidelines for the written report

The report should **NOT** be written as a collection of results. There should be a clear introduction, background, results and discussion section. Less is more; the report should be as concise as possible. Additionally, the following should be included in the report.

- The report should include the names of the students in the group
- Clear code with proper documentation attached as an appendix.
- A clear statement of the task, the assumptions made and the resulting MDP.
- A clear statement of the chosen RL method used and why it is chosen.
- **Most importantly: Discuss the implications and interpretation of your results and analysis. Include, what you have learnt from the analysis, what are improvements that can be made, etc.**

You will be assessed on how clear, logical and organized your report is. Additionally, you will be assessed on the formulation, implementation and solution of the chosen task.

The report should consist of **a single pdf** file with the relevant code included as an appendix. Each group should submit 1 report.

## Guidelines for the oral presentation

- The presentation is 20 minutes per group, with an addition of 3 minutes of questions.
- The presentation should cover points 3 to 5 in the written report.
- The presentation should be distributed evenly among the group.