Note: the final grade is 100% based on a project made in teams.

Step 0: Find a team of 3 - 6 persons

Step 1: Select one of the projects, or propose a similar one.

RL for Healthcare
RL for Robotics
RL for Recommender Systems
RL for Autonomous Driving
RL for Finance
Multi-agent RL
RL for Combinatorial Optimization
RL for physics and/or animation
RL for computer games
RL for RPA
Step 3: Your team has to chose a single option from below list:

Option A (Literature survey):

- Introduction
- What is the problem?
- Why is it an important problem?
- Survey
- Summarize the range of techniques by highlighting their strengths and weaknesses (i.e., the 8-12 papers that you read)
- Tip: this summary should not be a laundry list of techniques with an independent paragraph for each technique
- Suggestion: organize your summary based on desirable properties of the techniques
- Analysis:
- What is the state of the art?
- Any open problem?
- Conclusion
- What have you learned?
- What future research do you recommend?

Option B (Empirical evaluation):

- Introduction
- What is the problem?
- Why is it an important problem?
- Techniques to tackle the problem
- Brief review of previous work concerning this problem (i.e., the 4-8 papers that you read)
- Brief description of the techniques chosen and why
- Empirical evaluation
- Compare empirically the techniques for complexity, performance, ease of use, etc.
- Conclusion:
- What is the best technique?
- Is any technique good enough to declare the problem solved?
- What future research do you recommend?

Option C (Algorithm design):

- Introduction
- What is the problem?
- Why can't any of the existing techniques effectively tackle this problem?
- What is the intuition behind the technique that you developed?
- Techniques to tackle the problem
- Brief review of previous work concerning this problem (i.e., the 4-8 papers that you read)
- Describe the technique that you developed
- Brief description of the existing techniques that you will compare to
- Evaluation
- Analyze and compare (empirically or theoretically) your new approach to existing approaches
- Conclusion:
- Can your new technique effectively tackle the problem?
- What future research do you recommend?

Option D (Theoretical analysis):

- Introduction
- What is the problem or technique?
- What properties did you analyze/prove about this problem or technique?
- Analysis
- Brief survey of previous work concerning this problem (i.e., the 4-8 papers that you read)
- Describe the analysis performed
- Conclusion:
- What have you discovered about the technique analyzed?
- What future research do you recommend?

Projects will be presented until the last day of session, last course, or during semester, quite flexible.3