View Reviews

Paper ID
230

Paper Title
Hidden Information, Teamwork, and Prediction in Trick-Taking Card Games

Reviewer #5

Questions

1. Should the extended abstract be accepted for RLDM?
Yes

2. Should the extended abstract be given an oral presentation?
No

3. Please enter a review describing the strengths and weaknesses of the submission. Also please take care to provide feedback and advice to the authors as to how they can improve their work, and communicate it more effectively across disciplines.
In this paper, the authors present a system capable of learning to play the card games of 400.
They used supervised learning to learn a betting policy on how many tricks will be taking and then use reinforcement learning to learn how to play during the game.
Although the paper is interesting, half the short abstract (and 1 page of the full-length abstract) are about experiments that have not been done. Therefore, I suggest replacing that by a more complete description of the system. For example, they could try to describe how their network playing strategy compares to human strategies with some analysis of the network performance. Paper submitted to RLDM should not be placeholder for future experiments.
This paper has significant new results, but I would remove (or reduce) significantly the future work section.
In particular, the betting strategy and the playing strategy are strongly related in that game. It would be interesting to highlight that difficulty further.
Finally, they report out beating a simple e-Greedy bot, but the quality of play of that bot is unclear. It would be interesting if they could develop on the performance of that algorithm.
Finally, all cross-ref are ??, they need to recompile their pdf I think.

4. Should the extended abstract be considered for a Best Paper award?
No

Reviewer #6

Questions

1. Should the extended abstract be accepted for RLDM?
Yes

2. Should the extended abstract be given an oral presentation?
No

3. Please enter a review describing the strengths and weaknesses of the submission. Also please take care to provide feedback and advice to the authors as to how they can improve their work, and communicate it more effectively across disciplines.

The authors train a deepRL-style algorithm to perform a partner-based card game, Four Hundred. They find it outperforms baseline models, which vary in their sophistication. This is an interesting study on a top of increasing interest in the field. In the present form, it appears rather incomplete. Half of the abstract is allocated to the proposal for transfer learning across games. However, this approach is only sketched out as a proposal, rather than actually tested in the system.

Other comments:

* The performance plateaus very quickly, after only a few training iterations. Why do the authors think this is?
* What is the heuristic baseline model? This is only barely described, but described as the more “impressive” comparison for performance.
* There are few references provided, making it difficult to contextualize the current work against the literature.
* There are typos and formatting errors throughout the PDF.

4. Should the extended abstract be considered for a Best Paper award?

No