

PROJECT

Build a Game-Playing Agent

A part of the Artificial Intelligence Program

PROJECT REVIEW

CODE REVIEW 3

NOTES

SHARE YOUR ACCOMPLISHMENT!  

Meets Specifications

Brilliant Learner,

By carefully going through the project and through the reports, I am personally impressed with the diligent implementation of the required functions and well-written report. Great work done. 🍷 Now, it is time to move on to more challenging and interesting part of Udacity AI nanodegree. It was a pleasure reviewing this awesome project and I wish you a happy new year 2018!! 🎉

Advice.

The links below provide additional materials on the some of the topics discussed in this course. Feel free to check them out.

- https://en.wikipedia.org/wiki/Alpha%E2%80%93beta_pruning.
- <http://blog.hackerearth.com/minimax-algorithm-alpha-beta-pruning>.
- <https://www.youtube.com/watch?v=fj4uQpkn9V0>.
- <https://www.cs.cornell.edu/courses/cs312/2002sp/lectures/rec21.htm>.
- <https://sandipanweb.wordpress.com/2017/03/06/using-minimax-with-alpha-beta-pruning-and-heuristic-evaluation-to-solve-2048-game-with-computer/>.

Game Playing Agent

The minimax and alphabeta functions pass all test cases.

Correct!

Submission Includes All Files

All required file included.

Correct!

Heuristic Analysis

At least three evaluation functions are implemented and analyzed.

👍 Awesome work successfully implementing all the three evaluation functions. The evaluation functions are explicitly analyzed in the report and the code is well structured, which meets the specification of this project rubric.

A brief report lists (using a table and any appropriate visualizations) and verbally describes the performance of agents using the implemented evaluation functions. Performance data includes results from tournament.py comparing (at a minimum) the best performing student heuristic against the ID_Improved agent.

Nicely done. The report clearly shows the performance of the agents in a tabular format. It also explicitly describes the performance of the agents using the implemented evaluation functions.

Advice

Please, It is good to use graphs, bar charts, or histograms to visually present your results. This helps to ease interpretation of results while enhancing understanding of the results obtained.

Python offers many awesome visualization tools. To know more about some of these tools, check out the links below:

- <https://seaborn.pydata.org/index.html>
- <http://pygal.org/en/stable/>

The report makes a recommendation about which evaluation function should be used and justifies the recommendation with at least three reasons supported by the data.

Good work. The report makes a recommendation of the choice of evaluation function (Heuristic 1) and also provides justification with reasons to back it up.

Paper Summary

The write up is approximately 1 page (500 words) and includes a summary of the paper (including new techniques introduced), and the key results (if any) that were achieved.

Well written research review on AlphaGo by DeepMind Team.

Notes

Check out the following documents for more information about AlphaGo.

- <https://www.kidscodecs.com/go-and-ai/>.
- <http://www.bbc.com/news/technology-35785875>.
- <https://www.nytimes.com/roomfordebate/2016/03/09/does-alphago-mean-artificial-intelligence-is-the-real-deal/alphagos-success-shows-the-human-advantage-is-eroding-fast>.
- <https://www.wired.com/2017/05/googles-alphago-levels-board-games-power-grids/>

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