UDACITY

PROJECT

Build a Game-Playing Agent

A part of the Artificial Intelligence Nanodegree and Specializations Program

PROJECT REVIEW

CODE REVIEW 4

NOTES

SHARE YOUR ACCOMPLISHMENT!

Requires Changes

1 SPECIFICATION REQUIRES CHANGES

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. I wish you all the best and it was a pleasure reviewing this awesome project.

Recommendation.

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 more than three evaluation functions.The different functions have also been analyzed thereby meeting the rubric for this section of the project.

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.

Well done. The report uses visualization to clearly represent the results obtained from running the `tournament.py` file in a tabular format and it also explicitly describes the performance of agents using the implemented evaluation functions.

Pro Tip.

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 explains reasons for the performance of the heuristics which can be seen from their win rates.

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's 2016 Paper on Nature.

Recommendation.

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.

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