UDACITY

PROJECT

Build a Game-Playing Agent

A part of the Artificial Intelligence Nanodegree Program

PROJECT REVIEW

CODE REVIEW 2

NOTES

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Meets Specifications

Hey,

Here are answers to some of your questions:

> On the other hand I have observed a lot of variability on the % winning scores, sometimes even depending on the moment of the day.

The variability really comes from the randomness inherent in the algorithm. That's why for this project, you'll get better and more reliable results if you take the average over a few runs.

You're actually not too wrong in thinking it depends on the moment, because python's `random` function (which is used in the provided code) actually uses the current time in milliseconds to set its seed!

> The last thing, is after writing the heuristic_analysis, I have realised that probably cProfile and cumtime was not the best option to meas performance of the heuristic functions. Could you suggest any performance solution when no additional python modules can be used? Thanks a mill.

Why do you think they are not good ideas (I haven't used them before)? When I profile my python code, I usually just check the time before the function call (`time()`), check it after (`time()` after the return) and then the difference is the time the function took. However, I've also done this using decorators, and this is a really cool solution if you implement it. Here's a nice link on StackOverflow explaining the method: https://stackoverflow.com/questions/2245161/how-to-measure-execution-time-of-functions-automatically-in-python#2245290

Awesome, right?

I hope that covers your questions and I was able to help. Overall great submission! I love seeing that students have taken the time to understand the problem and work through it rather than just satisfying all the rubric points

Game Playing Agent

The minimax and alphabeta functions pass all test cases.

Correct!

Heuristic Analysis

At least three evaluation functions are implemented and analyzed.

Great ideas with your heuristics. As for your manhattan distance, one cause that it might not do exceedingly well is that the scores it produces are quite small and there isn't enough variance for the heuristics to extract information. One solution to this might to just multiply the distance by a constant, or square the individual terms..

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.

Great job in your report!

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.

I agree with your final recommendation and reasoning!

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.

Very good summary of AlphaGo.

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2 CODE REVIEW COMMENTS ›

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