UDACITY

PROJECT

Build a Game-Playing Agent

A part of the Artificial Intelligence Program

PROJECT REVIEW

CODE REVIEW 2

NOTES

SHARE YOUR ACCOMPLISHMENT!

Requires Changes

2 SPECIFICATIONS REQUIRE CHANGES

Great work on your submission !! You are well on your way towards the next project, just make the suggested changes and you will be done. Hope this nanodegree will be a great learning experience for you. All the Best 👍

Game Playing Agent

The minimax and alphabeta functions pass all test cases.

```
**********************************************************************
                     Test Result Summary
**********************************************************************

1. Test output interface of MinimaxPlayer.minimax():                  .
2. Test functionality of MinimaxPlayer.minimax():                     .
3. Test that minimax() raises SearchTimeout when the timer expires:   .
4. Test that MinimaxPlayer successfully plays a full game:            .
5. Test interface of AlphaBetaPlayer.alphabeta():                     .
6. Test the interface of AlphaBetaPlayer.get_move():                  .
7. Test functionality of AlphaBetaPlayer.alphabeta():                 .
8. Test that alphabeta() raises SearchTimeout when the timer expires: .
9. Test iterative deepening in AlphaBetaPlayer.get_move():            .
10. Test that AlphaBetaPlayer successfully plays a full game:         .
11. Test output interface of custom_score():                          .
12. Test output interface of custom_score_2():                        .
13. Test output interface of custom_score_3():                        .

----------------------------------------------------------------------
           . - Test Passed    F - Test Failed    E - Error
```

Submission Includes All Files

All required file included.

```
**********************************************************************
                        Test Result Summary
**********************************************************************

14. Submission includes heuristic_analysis.pdf:                       .
15. Submission includes research_review.pdf:                          .

----------------------------------------------------------------------
            . - Test Passed    F - Test Failed    E - Error
```

Heuristic Analysis

At least three evaluation functions are implemented and analyzed.

Your second and third evaluation functions are almost the same, as per the project specifications you need implement three different evaluation functions, so make sure you implement three different evaluation functions.

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.

Good work on report !! It will be much better if you can showcase the results of your heuristics using some visualisations (bar plots, factor plots etc)

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.

Here you need to come up recommending a evaluation function and backup your choice with **atleast** three reasons.

Consider the following questions to come up with your own reasons:

- Which heuristic do you think goes much deeper?
- How easy is your heuristic ?
- Which of your heuristics performs better and why?

One of the key takeaways here should be that it's hard to beat ID_Improved with only a better heuristic. There is a trade-off between a more complex, better heuristic, and a simple, fast heuristic because the simpler function allows the search to proceed deeper in the game tree, which can be more valuable than a better estimate at a shallow depth.

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.

Good summary !!

RESUBMIT

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2 CODE REVIEW COMMENTS ›

Learn the best practices for revising and resubmitting your project.

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