

TCG 2016 Homework2 result

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Grade

$score() =$

$$8UCB_correct() + 4UCT_correct() + 3PP_correct() + Bonus()$$

$$UCB_correct() = \begin{cases} 1, & \text{if you use one of UCB formula in} \\ & \text{the slide to compare nodes.} \\ 0, & \text{otherwise} \end{cases}$$

- 1 Writing a function name UCB but not using it does not count.

$$UCT_correct() = \begin{cases} 1, & \text{if you implement UCT correctly.} \\ 0, & \text{otherwise} \end{cases}$$

- 1 Some only consider 2 layer from root. The correct algorithm may expand more than three layers.
- 2 Some choose next selection node among all leaves. The correct algorithm only compare UCB between siblings.
- 3 Some only do one S-E-S-B each move.

$$PP_correct() = \begin{cases} 1, & \text{if you implement PP correctly.} \\ 0, & \text{otherwise} \end{cases}$$

- 1 Some says PP will worsen the program but they do not tell me how to add it back. Thus I can not test it and trust it.
- 2 Some only do PP on root node.
- 3 Some do not use formula in slide to prune. For example, prune by winrate without considering variance.

Inflation of Simulations

Some students claim they can simulate 2×10^5 at initial position but their rank is not as expected. Then I count all depth of expanded nodes and find out what happens. For example:

depth	# of expanded nodes
1	1
2	4
3	3
4	2
5	1
6	1
7	1
...	1
60	7122
61	137122

Tournament Info

- 1 33 programs. Each program plays 32×2 games.
- 2 There are 7 program which violate the rules most of the time.
- 3 win +1 draw +0 lose -1

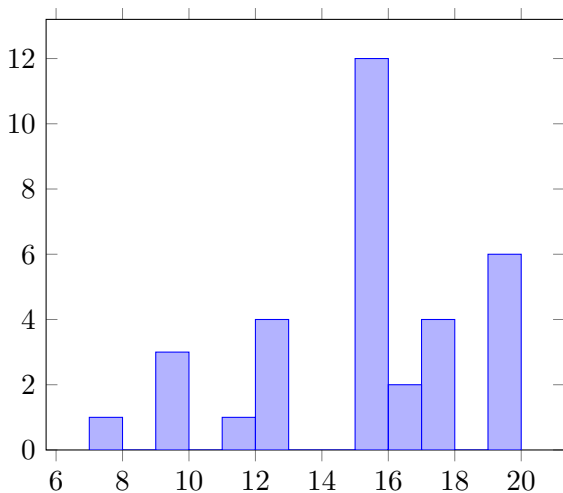
Tournament Result

rank	sid	score
1	R05921058	58
2	R04944002	48
3	R04922030	47
4	B02902105	43
5	B02902011	40
6	R04922024	39
7	B01902112	33
8	R05922089	32
9	B02705021	31
10	R03922164	31

rank	Bonus()
[1, 1]	5
[2, 3]	4
[4, 6]	3
[7, 10]	2
[11, 33]	0

http://www.csie.ntu.edu.tw/~tcg/2016/tcg2016HW2_vslog.zip
for more.

Score Distribution



C++ reminder

- 1 Do not use `free()` to release memory allocated from operator **new**. **new** \Leftrightarrow **delete**; `malloc()` \Leftrightarrow `free()`.
- 2 **int** a(7122),b(10000); **double** c = (**double**)(a/b);
- 3 **if**(n = 0){...}
- 4 **int** *x; *x = 0;
- 5 **int** ML[64],*MLED(B.get_valid_move(ML));
for(int i(0);ML[i]!=*MLED;++i){...}

Only in HW2, We ignore some of these mistakes. In final project, if your code seems correct but the program do not have the expected effect because of wrong use of C++, then it does not count as correct.

- 1 Display ju_24_21.txt
- 2 Man VS Machine