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A Report on 2048 Project:

Step 1: I have Cloned all the required files on my computer in order to make the project work. Initially , I just played some random games in order to get familiar with the 2048 game. Next , I played some more games with MinMax.py to get more familiar with the game.

Step 2: In this step, I have created a file named “[MyAgent.py](#)” and copy pasted the [MinMax.py](#) code into the new file. Then I just ran some games in order to get the score like I did 5 tests and I got an average score of ~11K. This was the Professor’s code , it gave a good average score of approx ~11K.

Step 3: I pushed this code into git in order to just check my position with the other students , and shockingly I didn't get my name on the leaderboard ,which was strange and I don't know why this had happend.

Step 4: And finally I tried a different version of code , first I only tried to change the move order function and got a low score, I did not push this into my git repo as my name is not appearing on the leaderboard ,I don't know this is happening. And I tried with 0.1 sec ,I got an average score ~4k to 5k, for two or three runs.

Step 5: Now, I did many attempts in order to get better results. I did tune the code by writing a heuristic function, and I did like 10 runs with 0.5 sec as a time limit.

1st:13660,
2nd:11872
3rd:6484
4th:10916
5th:6044
6th:5100
7th:11584
8th:6724
9th:6848
10th:5240

Total avg score: 8853.

This was the best I could do and got these results.

Step 6: And did many tuning on the code but in the first attempt itself I got like ~6k,in the first run, and the same like 3k or sometimes 5k on the initial runs.

Step 7: Once again changed the parameters in the heuristic function and did 5 runs

And I got an average score of ~4k to 5k. I know this is the worst score but I am still trying to do better. And yet, again I pushed my code, but the leaderboard don't have my name on that list.

Step 8: **FINAL VERSION**

This is my best version with an average score of ~12240 with 28 runs on my computer. I know it's not the best version but for me, this is the best version for me with 0.5 secs per move. Here are the scores for the 28 runs:

5782,15433,15500,14372,22264,11804,15608,7088,13336,6936,14980,7528,6752,11624,
6984, 14996,14112,13148,14964,15644,13972,14964,11888,14860,11724,2936,11644,11884

I did push this version of my code to github, and yet again, still, there are no roots of my name on the leaderboard, I don't know why. And I have mailed the Professor 3 times but Sir never gave me a reply about this. This is my best version.