

Algorithm

- 1. Our heuristic function returns either a score of  $+\infty$  if the player wins and  $-\infty$  otherwise.
- 2. The program computes the number of legal moves remaining for the player (*my\_moves*) and opponent (*opponent\_moves*) respectively, and the heuristic score is computed and returned as follows:

$$score = my\_moves^2 - opponent\_moves$$

- 3. The results show a significant increase in heuristic score for our heuristic function (*attached in low-wea150007.py*) if compared to "ID\_Improved".

Results

```
*****
Evaluating: ID_Improved
*****

Playing Matches:
-----
...

Results:
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ID_Improved          64.86%

*****
Evaluating: LOWS_HEURISTIC
*****

Playing Matches:
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Match 1:  LOWS_HEURISTIC vs Random      Result: 188 to 12
Match 2:  LOWS_HEURISTIC vs MM_Null     Result: 163 to 37
Match 3:  LOWS_HEURISTIC vs MM_Open     Result: 112 to 88
Match 4:  LOWS_HEURISTIC vs MM_Improved Result: 115 to 85
Match 5:  LOWS_HEURISTIC vs AB_Null     Result: 159 to 41
Match 6:  LOWS_HEURISTIC vs AB_Open     Result: 127 to 73
Match 7:  LOWS_HEURISTIC vs AB_Improved Result: 122 to 78

Results:
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LOWS_HEURISTIC          70.43%
```