

Evaluation Function used for depth-limited search

- Counts of 4 in a row, 3 in a row with a blank, 2 in a row with 2 blanks, 1 in a row and 3 blanks respectively are calculated as f_1, f_2, f_3, f_4 .
- Weights assigned for these are $w_1=1, w_2=0.90, w_3=0.50$ and $w_4=0.40$ respectively.
- The total score for the game state is calculated as summation of $(f_1 * w_1)$, $(f_2 * w_2)$, $(f_3 * w_3)$ and $(f_4 * w_4)$.
- $\text{playerScore} = (f_1 * w_1) + (f_2 * w_2) + (f_3 * w_3) + (f_4 * w_4)$
- For Max and Min player, this score is calculated.
- $\text{Eval}(\text{Max}) - \text{Eval}(\text{Min})$ is calculated and returned.