

Experiment 2

Data:

Player 1 (Vanilla): 100 nodes, 50 nodes, 25 nodes

Player 2 (Modified): 150 nodes, 125 nodes, 100 nodes, 75 nodes, 50 nodes, 25 nodes

(Change from 1000 nodes to 100 nodes due to the incredibly slow time)

Set 1:

Trial #1:

Draw: 24%

Player 1: 100 nodes (23%)

Player 2: 100 nodes (53%)

Trial #2:

Draw: 20%

Player 1: 50 nodes (26%)

Player 2: 50 nodes (54%)

Trial #3:

Draw: 25%

Player 1: 25 nodes (19%)

Player 2: 25 nodes (56%)

Set 2:

Trial #1:

Draw: 18%

Player 1: 100 nodes (13%)

Player 2: 125 nodes (69%)

Trial #2:

Draw: 17%

Player 1: 100 nodes (10%)

Player 2: 150 nodes (73%)

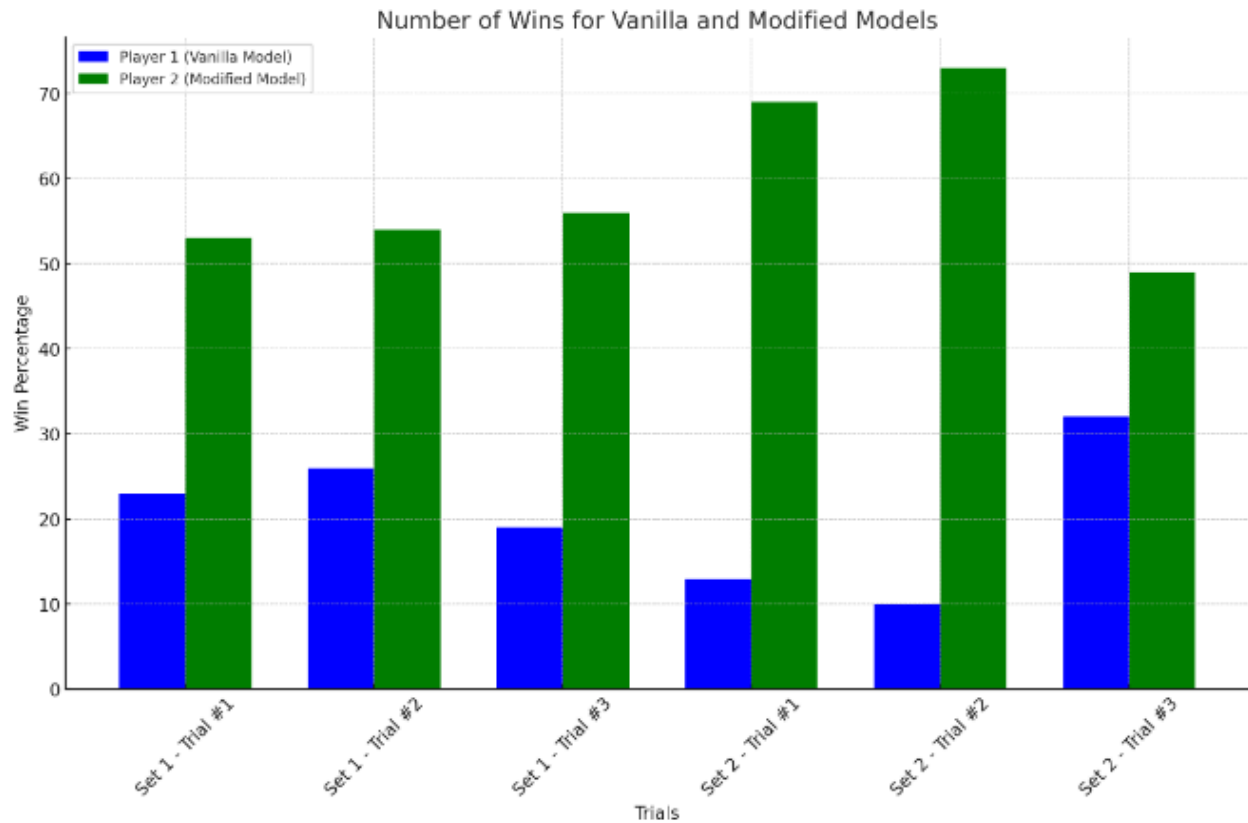
Trial #3:

Draw: 19%

Player 1: 100 nodes (32%)

Player 2: 75 nodes (49%)

Plot:



Description:

Does the modified version win more games?

The modified version performs significantly better than the vanilla version.

Does this change if you increase or decrease the size of the trees?

When node values are uniform with a variety of ranges the modified version still performs better than the vanilla version. Additionally, as to be expected, when we decrease the node value for the modified version we give the vanilla version some slight edge and it starts to improve. However when we give edge to the modified version performance significantly increases. Overall the modified version at all times out performs the vanilla version.