The graph shows that AlphaBetaAI consistently performs faster than Minimax. This shows that certain branches of the decision tree are being pruned. AlphaBeta won each match, regardless of whether it started the game first or not.

In a tournament AlphaBeta is the clear choice, as AlphaBeta performs both better and faster than Minimax.

The following table shows the average time taken per move for AlphaBeta v/s Minimax, as well as the winner for each game

Each game was conducted twice, once with Minimax going first, and the other with AlphaBeta going first.

|  |  |  |  |
| --- | --- | --- | --- |
| Ply | Minimax | AlphaBeta | Winner |
| 4 | 16.2110965873884 | 14.6705218190732 | AlphaBeta |
| 3 | 2.5991220672925 | 2.3990415443074 | AlphaBeta |
| 2 | 0.2002567052841 | 0.1791056271257 | AlphaBeta |
| 1 | 0.0240622483767 | 0.0255152511597 | AlphaBeta |