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Man vs. Machine:

Improving Computer Go

The game of Go is one of the oldest board games known to mankind. Yet, despite the exponential growth of computing power as predicted by Moore's Law and increased research in AI, which has led to AI players that can beat the best human chess players, the best AI Go programs cannot even compete at a high amateur level. Because of this difficulty, an open source project GNU Go has received widespread international support, and plays at a level comparable to top commercial software. GNU Go provided me with an excellent starting block to work from. I am most interested in how the program computes concepts of influence and territory (i.e. which player controls a given intersection of the board). Currently the GNU Go engine makes extensive use of pattern recognition to match positions on the board with a database to help with final calculations of influence. The database is substantial and changes to it are done by hand. My goal is to expand some of Bouzy's algorithms (which were used in the past for influence calculations) and provide a viable alternative to the hand-tuned pattern matching.



Poster Number: Session: