

Build a Caro chess game system using Minimax and Alpha-Beta Pruning algorithms.

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Abstract: The thesis studies the application of adversarial search algorithms in artificial intelligence to build an AI capable of playing Caro (Gomoku). The author implements the Minimax algorithm combined with Alpha-Beta pruning to reduce the number of nodes that need to be traversed on the decision tree, thereby optimizing processing speed while ensuring intelligent moves. The system provides an intuitive user interface, allows difficulty customization, and supports features such as move suggestions, helping players train their tactical thinking.

Keywords: Caro, Minimax Algorithm, Alpha-Beta Pruning

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